THIS WEEK'S National Petroleum NEWS

Index to Coming Meetings

Tennessee Oil Men's Association, Hermitage Hotel, Nashville, Aug. 19, 20.

North American Gasoline Tax Conference, King Edward Hotel, Toronto, Ont., Sept. 2, 3, 4.

American Chemical Society, Hotel Gibson, Cincinnati, O., Sept. 8 to 12.

Ohio Petroleum Marketers Association, Deshler-Wallick Hotel, Columbus, O., Sept. 17.

National Petroleum Association, Hotel Traymore, Atlantic City, N. J., Sept. 17, 18, 19.

National Safety Council, Petroleum Section, Pittsburgh, Pa., Sept. 29 to Oct. 4.

International Petroleum Exposition and Congress, Tulsa, Oct. 4 to 11.

Big Four State Jobbers Convention, (Missouri, Iowa, Kansas and Nebraska) Kansas City, Mo., Oct. 14, 15, 16.

Independent Oil Men of America, Marketing Congress and Exhibit, Statler Hotel, St. Louis, Mo., Nov. 2, 3, 4, 5.

American Petroleum Institute, Stevens Hotel, Chicago, Nov. 10 to 13.

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CLARENCE H. WRIGHT was elected July 24 president of the Sunray Oil Corp. He had been vice-president of that company and president of the Sunray Oil Co., the operating subsidiary. He retains the latter position also. Mr. Wright came into the organization upward of 10 years ago from the banking and mercantile businesses and was one of the early financial sponsors of the company, whose growth has been pronounced the last two years. He is a director of the First National Bank of Oklahoma City. While offices of the holding company are in New York, Mr. Wright will continue to live in Tulsa.

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Vol. 22 CLEVELAND, July 30 No. 31

The Going Is Harder at Oklahoma City For the Stock Promoters

By Lawrence E. Smith
N. P. N. STAFF WRITER

OKLAHOMA CITY, July 25

THE going is getting somewhat slow for the promotion gentry in Oklahoma City.

Several reasons may be assigned for this. One is lack of money in the hands of some of the folks who buy this kind of stocks. The promoters have about made the rounds, and picked up the easiest funds. Another reason is the growing suspicion that people who sell or try to sell $300,000 worth of stock in one of these townlot locations cannot be very sincere.

The latter is perhaps the more cogent reason for not buying stock. It has come to the attention of even those who specialize in end-of-the-rainbow investments that something known as proration is going on.

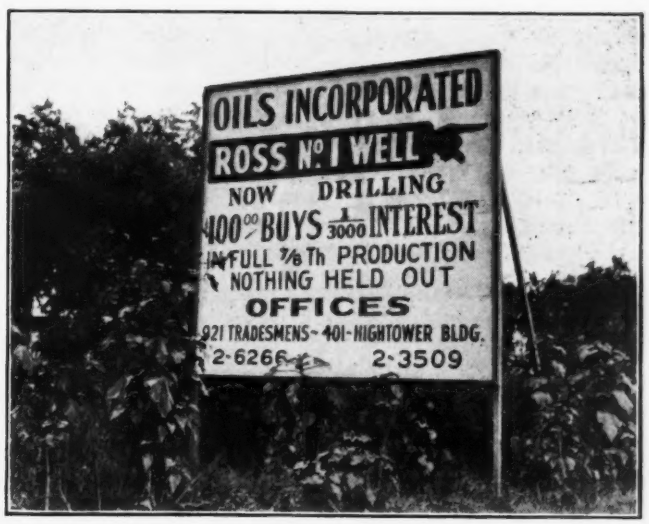
They are gossiping among themselves to the effect that, with 75 days shut-down time required by the state corporation commission after a well is completed, then only part-time production thereafter — currently limited to 18¾ per cent of potential — one's hundred dollar investment would be tied up for a long, long time. And, with the uneasiness now felt as to the ultimate recovery of the field, perhaps that investment would be "frozen" for all time. Perhaps is too mild a word.

In short, it is getting to be more and more difficult to make the customers believe in such talk as this:

"How much money you make depends upon how much you invest.

"An 8000-barrel well would repay your investment with a

CENTURY PET. CO.
JEFFERSON WELL #1
you may purchase 1/3000 undivided interests in this well
for $100.00
this price subject to increase without notice, get yours now!
our Wyatt #1 was oversubscribed in LESS THAN 30 DAYS
phone our office 405 Pet. Bldg. 7-3536
FOLLOW ARROW TO JEFFERSON #1



Two samples of the billboard advertising along the roads near Oklahoma City used by the stock selling companies to catch the would be investor's dollar

full 35-day run, figuring the price of oil at $1.36—the present price. All wells brought in near this location have been larger.

"A $100 interest in an 8000-barrel well would bring $103.13 for a full 35-day run.

"The operating expense of a producing well would be small. The share of each $100 interest would probably average less than $1 per month.

"With your investment repaid by such a well, your income would continue as long as the well produced oil.

"You cannot share in the huge profits of the Oklahoma City field without some action on your part. Act now!"

This advertisement of the Plains Petroleum Corp. appeared in the Tulsa Tribune. It is the old familiar line, that an 8000-barrel well goes merrily on making that amount with no decline at all. The well it was advertising, No. 1 Sadler, is in a spot that is going to get as much decline as any of them. It is in the southwest quarter of 2-11-3 and in that same quarter is a total of 30 operations, or one well to each five and a fraction acres.

In the northwest quarter of the same section there are 40 operations.

When it is remembered that most oil men believe that, for this deep territory, the conventional well-to-10 acres is too close spacing, the outlook for a well that has only four acres—many of them are on locations of a few townlots—is a doubtful thing to invest money in.

This gem from an advertisement of the C. C. Julian Oil & Royalties Co., appeared in the Bartlesville, Okla., Examiner:

"Do you realize that every $100 you invest in this syndicate gives you an assignment of 1-1750th part of 50 per cent of our total production from this well?"

The answer, obviously, is, "What of it?" It sounds a little better than to offer 1-3000th, but Mr. Julian's offer is for only 50 per cent of "our total production." That would be 1-3500th of the working interest, which Mr. Julian doesn't specify. This is the same Julian who organized the circus under his name in California. He left the company before the big trouble started which resulted in several people going to jail.

Oklahoma City's officials are making a good fight to keep down the townlot drilling within the city limits. Much of it is just outside the boundary, where the city can't touch it. But nearly every available location out there has been made and the principal place for new work is now inside the city.

Under the new ordinance, which becomes effective 30 days after date of passage, which was July 3, there is a perfect stymie laid for the promoter. This is the requirement of a $200,000 bond to compensate for any injuries or damages, either personal or property, that may result from the drilling of a well.

Each well calls for a separate bond and this is not a "straw bond." The ordinance provides it must be written by some bonding and indemnity company licensed to do business in the state. Such bonding companies require the deposit of collateral, government bonds, cash or securities of the highest class where the applicant is not backed by large assets. The bond runs in the name of Oklahoma City. This bond provision is retroactive in that it applies to all wells even though permits may already have been issued.

The same ordinance prescribes methods of operating. It specifies the weights and strength of equipment to be used in drilling and producing. It is unlawful, under this ordinance, to bail wells between sundown and sunrise, or during a period when gas may settle on the ground, or during any electrical storm or during any period when the velocity of the wind is more than 25 per miles per hour. Bailing is the common method of bringing a well into production. Three master gates are required on a well.

More inspectors will be required by the city to enforce all the provisions of the ordinance. At present city firemen are going about in squads of four to six to make inspections of wells in the city limits.

All this fuss is a bit onerous to the true promoter. He prefers to be equipped with a stock record book, a boiler, derrick and abstract of title, and go to work. On top of all the other indignities it has thought up, the city collects $1000 for each permit granted.

Probably the only way the city could get at these people was to make operating conditions hard. The business of investigating stock selling does not come within the city's jurisdiction and the state blue-sky department has sat quietly by, letting the fun go on. It claims it is not clothed with enough authority to stop the sale of pre-organization certificates, a common method of promoting.

Recently the United States district attorney in Oklahoma City publicly criticized the state for its passive attitude. He said the federal government was unable to act except where fraudulent use of the mails could be shown. He said that in refusing to grant permits and then letting the sale of pre-organization certificates go on, the state commission was merely side-stepping the issue. Homer Hurst, secretary of the state commission, said the law is not adequate to take care of the pre-organization schemes but that the next legislature would be asked to enact a new law.

One of the most severe penalties the city may have to pay for townlot drilling is the proposed increase in insurance rates. The application of the underwriters for an increase of 250 per cent over existing rates will be heard by the state insurance commission on Aug. 4. It will represent, if granted, an increase of more than $3,000,000 annually in the insurance bill people of Oklahoma City must pay.

Small extensions of the zone defined by the city as open for drilling have recently been made and others are contemplated. Petitions by property owners in blocks not now a part of the drilling zone are received every few days asking that operators be permitted to drill. The wistful ones are on the south and southeast parts of the city. In contrast are the petitions filed by residents farther north, where property values are high, protesting against inclusion of their sections in the drilling area.

The Editors' Viewpoint

Clearer Thinking Forecast by Moran

CONFIDENCE that the trend of the oil industry is in the direction of reform of conditions that have led to its depression is expressed by D. J. Moran, president of the Continental Oil Co., in the following taken from the Conoco Magazine, company publication.

"Needless to say, all companies, partnerships and individuals, that are the nucleus of the petroleum industry, have had common problems," said Mr. Moran. "Distressing conditions have given rise to the widespread policy of integration and the building of facilities much beyond the needs of our purchasing clientele. If the rate of increase in the consumption of refined products during 1929 is used to gauge future demand, it can be seen that present expansion would satisfy this demand for a 20-year period.

"The growth of the number of dealers, jobbers and co-operatives during the past two years has set up an unparalleled and destructive state of competition. As it stands today, there is no such thing as a price structure founded upon basic costs of production and manufacture. It is either a wild orgy of converting crude and refined products into cash or a fight to establish large gallonage figures.

"The economist has had no place in the counsels of the petroleum industry. There have been discussions to which the saneness of stabilization has had numerous subscribers. In spite of that, legitimate operators have been faced with a division of gallonage and low prices which have resulted in increases in their depreciation and other reserves without commensurate increases in their surplus accounts.

"It is only fair to say that this condition will be improved, because the trend of thinking is in the proper direction. Plans and formulas are being suggested and, when matured, will undoubtedly offer a solution. On performance, there are no products today that are more definitely undervalued, based upon a fair return on the investment involved, than gasoline and motor oils.

"The future holds nothing less than a decided change for the better. This must be accomplished by a complete reorganization of the industry. The fundamental necessities of such a change are being processed. It is a notable fact that the public is receiving outstanding consideration in all of these deliberations, not only because they have a vital interest in what they will pay for gasoline, but because of widely distributed stock ownership."

The Coal Industry Is Waking Up

THERE are indications that the coal industry is going to furnish a new kind of competition to oil for domestic heating in the not far distant future.

That competition is going to meet the biggest argument in favor of oil heretofore—its convenience and comfort to the user—with similar claims for coal.

Automatic stokers and new designs of furnaces are going to make it possible for the coal people to use in their advertising the same pictures of children in fresh clothing playing on the basement floor, and of the housewife blithely turning her back on the home for the day that the oil burner people have been using in the past.

Walter Barnum, president of the Pacific Coast Co., New York, had this to say at the annual meeting of the National Retail Coal Merchants Association, at Asbury Park, a short time ago:

"The big truth the coal industry must face today with respect to its domestic business is that its premier domestic products have been robbed of their special form value advantage, because the use of oil and gas has been developed to take advantage of their own special form value; and for the moment it must be recognized that these other fuels have surpassed, in convenience and service, lump coal fuel and have, therefore, partly destroyed the Special value advantage of that fuel. . . .

"The problem before the coal industry with respect to household fuel is to restore to its product its leadership in value, whether that leadership be based on form, heat units per dollar, safety, service, or whatever it may be. To succeed we must lead, not follow, and it is my purpose to show that we in the coal business can not only catch up to our competitors, but that we can surpass them in ability to give safe, convenient, quiet, smokeless, odorless, economical, automatic household heating service.

"The answer is the automatic domestic stoker, which is being developed today to a point where the householder need never go into the cellar even to fill the hopper on the machine. The stoker will give all that oil and gas can give and infinitely more, for it will give safety and economy of house heating, and also hot water heating of an economy unattainable by any other method. By applying to machines now on the market a plan of leasing heating service these advantages can already be enjoyed."

N. Y. Standard-Vacuum Merger Hearings Are Ended

HEARINGS in the U. S. government's effort to prevent the consolidation of the Standard Oil Co. of New York and the Vacuum Oil Co. were concluded in New York July 23 before Special Master Fred L. Williams.

The case will be argued Oct. 6 and 7 before the United States Circuit Court of Appeals, Eighth District, sitting then at Omaha.

Master Williams has until Sept. 10 to submit a printed digest of the proceedings here, which lasted three and a half weeks.

Only three witnesses were examined in the three days of hearings this week. They were Harold F. Sheets, a director of Vacuum; Peter M. Speer, general counsel, director and vice-president of Standard, and E. R. Brown, president, Magnolia Petroleum Co., a Standard of New York subsidiary.

The government continued its efforts to prove that consolidation of the two companies would eliminate competition in the oil industry. Mr. Sheets said with a merger the combine would be sixth in crude oil production. He gave these figures on 1929 crude production by principal interests: Royal Dutch-shell, 175,922,000 barrels; Standard Oil Co. of New Jersey, 101,100,000 barrels; Gulf Oil Corp., 100,000,000 barrels; Standard Oil Co. of Indiana, 89,425,000 barrels gross; Standard Oil Co. of California, 51,534,000 barrels net; Standard of New York-Vacuum, 57,986,392 barrels gross or 44,958,200 barrels net, and The Texas Co., 50,675,200 barrels gross.

The merged interests would be fourth in refining capacity, Mr. Sheets said. Daily average charging capacities were given as follows: Standard of New Jersey, 718,000 barrels; Royal Dutch-Shell, 704,200 barrels; Standard of Indiana, 404,500 barrels; Standard of New York-Vacuum, 263,000 barrels; Standard of California, 244,700 barrels; The Texas Co., 232,800 barrels, and Gulf 177,000 barrels.

The government attacked the lists of production and refining capacities submitted by Mr. Sheets on the ground they failed to consider the financial resources of the two companies. Mr. Sheets said the crude oil resources and refining capacities were fundamental considerations. If finances were considered, he said, it would be essential to consider book values.

Mr. Sheets testified the merger was essential to enable the two companies to pool their resources to the benefit of the companies and consumers. He asserted that mergers did not always eliminate competition but sometimes made it keener.

Under cross-examination Mr. Sheets testified Vacuum had spent $36,000,000 in acquiring marketing outlets since 1926. Negotiations were pending with two small marketing companies for their retail outlets, he said.

A laugh was induced when Mr. Sheets was asked if the courts approved the merger, the combine would take over the Royal Dutch-Shell group.

Mr. Speers testified that, in 1916, Standard of New York had 512 bulk distributing stations in New York and New England. Its competitors had 160. In 1928 Standard and Vacuum together had 547 and their competitors 1541.

In 1918 Standard did 60 per cent of the business in that territory, he said. In 1926 it did only 46 per cent, last year 34 per cent, and in the first four months of 1930 only 32.7 per cent.

Mr. Speer testified that domestic and foreign competition demands integration and the combination of Standard and Vacuum would bring that about. He said the Royal Dutch-Shell has the strategic position in the oil business abroad, that, if the merger went through, Standard could use the equipment and facilities of Vacuum in various countries abroad.

Mr. Speer described how Standard of New York had been cut loose by the 1911 dissolution decree with no crude oil supply, little refining capacity but a large marketing business. In overcoming the handicap of a disproportioned business it had acquired Magnolia Petroleum Co., General Petroleum Corp. of California, and White Eagle Oil Refining Co. It was now in competition with the Standard of New Jersey, California and Indiana, and other companies he said.

Mr. Brown testified to the importance of crude oil ownership to an integrated company. He also described the difficulties attending the overproduction of crude oil and how efforts are being made to overcome those difficulties.

C. H. Wright New Head Sunray Oil Corp.

TULSA, July 26.—Clarence H. Wright was elected president of the Sunray Oil Corp. in New York, July 24. He succeeded Crosby Gaige, New York capitalist and theatrical producer, who had held office since the resignation of C. C. Hamilton in April. Mr. Gaige becomes vice chairman of the board.

Mr. Wright was elevated from the vice-presidency, to which position R. S. McFarland, of Tulsa, was elected.

The Sunray Oil Co., operating subsidiary of the corporation, continues to be headed by Mr. Wright, with Mr. McFarland vice-president and general manager. R. P. Abele was elected vice-president in charge of production and W. D. Forster secretary and treasurer. Of the holding company, I. E. Rines is vice-president and secretary and Mr. Forster treasurer and assistant secretary. E. A. Petersen is assistant secretary and assistant treasurer.

The corporation controls, besides the Sunray Oil Co., the Homaokla Oil Co. and Operators Oil Co.

THE OIL JOBBER--

Who was - - 5 Years ago
Who is - - - - - - -Today
Who will be- - Tomorrow

Second of a series of discussions or observations of trends and conditions as seen by L. V. NICHOLAS

FIVE years ago, the oil jobber was a truly "Independent" individual. He could buy quality products in a keenly competitive market, sell them readily at retail under the sponsorship of his own brand name and make a profit that was exceedingly wide and inviting (perhaps too inviting).

Today that field is rapidly narrowing. Practically all of the premium quality grades are now manufactured and sold under the brand name of the refiner producing them and the jobber acts as local agent or distributor under a general supervisory sales plan sponsored and directed by the refiner and with price control looming in the background.

Before going any further, check over this statement, not only to determine that it is true, but also to determine whether or not it is a sound, healthy condition.

As to the truth—Is it not a fair statement to say that 90 per cent of the premium priced motor gasolines sold today are of anti-knock quality and rating and sold on that basis?

Is it not fair to estimate that at least 60 per cent of the anti-knock premium grades sold are of the various "Ethyl" brands and are refinery controlled?

Is it not a fair statement to say that of the 40 per cent left, outside of "Ethyl," the overwhelming percentage is made up of refinery controlled, specially processed brands sold under a refinery brand name such as Sinclair's "HC," Cities Service's, "Koolmotor," Pure Oil's "Gyro," etc.?

As to the situation being healthy (which means in the public interest)—according to all economic standards, it appears to be and I believe it is.

Can a business be economically sound that is not operated at a profit and can a business long operate at a profit which creates of itself the competition that breaks down its own price structure and makes profits difficult, if not impossible?

Under the old system, the manufacturer had absolutely no voice in the method or manner (as to price or sales policy) under which the jobber resold his products and this in spite of the fact that to a very great extent the sales were made in direct competition with the refiners own retail outlets.

Refinery "branded" products of superior quality for which a market has been created and is maintained by the refiner, has offered a way out. More than ever before, the public is buying branded goods dispensed through controlled outlets where the integrity of the brand is protected and guaranteed by the manufacturer.

Slowly but surely, the overhead cost of marketing will begin to show a decrease at the stations where public service more nearly approximates public demand, and it would take a mighty brave man—or a very ignorant one—to deny that the average nationally or seminationally advertised brand of gasoline or lubricating oil today is not the best value the public has ever received and the service more satisfactory and superior in every way. The present situation can be rated generally sound and healthy.

Competition which raises prices is just as definitely a public menace as monopoly that raises prices and a great deal more difficult to handle.

In the oil industry, our over-production of crude oil and our over-production of gasoline, together with the attendant over-competition in distribution and sales, has brought about a situation that has increased overhead and raised prices, any and all theories to the contrary notwithstanding.

The present marketing and manufacturing trends are beginning to correct this condition and the time for getting in line with the readjustment, by the jobber, has just about arrived.

Public acceptance is the court of last resort in all merchandising problems. Without pub-

lic acceptance, the best product will fail. With public acceptance, a mediocre brand could become a great sales success. But—the public is exceedingly discriminating and there are few records of undeserved success.

Today, practically without exception, the bulk of all refinery products are directly sold to the consuming public through owned or controlled retail outlets of the refinery producing them and under a refinery controlled "brand" name.

In the battle for public acceptance, the refinery "brands" must be given the credit for having won the fight; it makes little, if any, difference how they won. For the purpose of this analysis, it is sufficient to admit the result—they have won.

But — to hold public acceptance will from now on be a "battle of brands." In other words, the "Refinery brands" have won as a class, but there still remains the battle as between brands and this battle will be pushed vigorously and prolonged indefinitely and the jobber who shapes his course to meet this situation will play an increasingly important role, as we shall see.

(Second of a series)

T. B. Nicholas

Marketing Code's First Birthday Is Quiet

NEW YORK, July 25.—Today was the first birthday anniversary of the promulgation of the code of Practices for the Marketing of Refined Petroleum Products.

In the American Petroleum Institute offices all was quiet as a panther's tread. No complaints of violations of the code were received and the reports of state code committees to Paul E. Hadlick, secretary of the A. P. I. marketing division, indicated there were few local disturbances.

In the year the code has been out of the offices of the Federal Trade Commission at Washington, more than 15,000 marketing companies and individual marketers have sanctioned it by filing their signatures with the trade commission. Only one sizeable company has withdrawn its signature and it reports it is living up to provisions of the document except where competition has forced it to give away gasoline, oil or other goods of value on opening days at new stations.

Misunderstandings which were frequent in the early months of the code, apparently have subsided. Virtually all complaints are now settled by state committees and are not passed on to the national committee on interpretation of the code.

Code committees are meeting monthly in nearly all states and some have adopted a form of report intended to spur attendance at all monthly meetings. In North Carolina and Virginia, for example, the minutes contain the names of all members of the code committee or their proxies that attended, the names of the other marketers present, and members of the committee that were absent.

W. R. Boyd, Jr., executive vice-president of the A. P. I., this week announced the appointment of R. E. Hodgson, manager of Standard Oil Co. of Kentucky at Atlanta, as chairman of the Georgia code committee.

Two Companies Report Gain in Earnings

CLEVELAND, July 28.—Improvement in earnings the first half of 1930 over first half of 1929 were reported by Transcontinental Oil Co. which is to be merged with the Ohio Oil Co., and Pacific Western Oil Co., the California production company.

Transcontinental's net was approximately $650,000 larger before federal taxes. Pacific Western gained more than $150,000.

In the second quarter Transcontinental's net before federal taxes almost balanced its net in the second quarter of 1929.

Preliminary statement of Atlantic Refining Co. for the half year shows a contraction of $6,000,000 in net earnings.

Net of American Republics Corp., a holding company for several supply and equipment subsidiaries as well as oil companies, fell more than 70 per cent this year as compared with last year's net. The largest decline was in the first quarter. The second quarter showed earnings almost on a level with those of a year before.

Statement of second quarter and first half results follows:

Second Quarter	1930	1929
Atlantic Refining	$2,819,000	$8,862,000
American Republics	46,577	164,713
First Half	**1930**	**1929**
American Republics	$241,452	$248,501
Transcontinental	*1,188,748	*1,188,271
Pacific Western	1,222,681	1,065,155
Transcontinental	*2,362,617	*1,715,822

*Before federal taxes.

U. S. Steel Takes Option On Oil Well Supply

PITTSBURGH, July 26.—United States Steel Corp. has taken an option to buy the business of the Oil Well Supply Co., Benjamin Franklin Harris, president of Oil Well, announced here this week. The option expires Aug. 25.

It will be necessary for Oil Well stockholders to ratify a deal. No meeting date has yet been set.

Oil Well had assets of $27,287,426 Dec. 31, 1929. It is one of the larger oil field supply manufacturers and distributors.

Present Refinery Runs, Maintained, Will Cut 1930 Gasoline Stocks

By J. C. Chatfield

N. P. N. STAFF WRITER

REFINERY operations in the United States are now down to a point which will permit satisfactory liquidation of gasoline stocks only if the current rate is maintained for the remainder of the year.

If crude runs to stills creep up in the fall, as they did last year, there can be no question that our industry will enter 1931 with burdensome inventories.

An estimate of June shipments from U. S. refineries, based on weekly American Petroleum Institute reports, indicates that gasoline business of domestic manufacturers in the first six months was about 8 per cent greater than the first half of 1929. With half the year gone it can be estimated with a fair degree of safety that the year's total shipments will approximate the estimate of 8 per cent gain over 1929, which was made last December by a number of our industry's economists.

The most doubtful element the rest of the year probably lies in the export situation. May exports were below May, 1929, and reports are current that this portion of the gasoline business may not recover quickly. Last year exports constituted 14 per cent of the total gasoline demand in the U. S. In May this year exports were less than 12 per cent of total demand for U. S. gasoline. Total demand that month was only 4.29 per cent greater than in May, 1929, while domestic demand was 5.75 per cent greater than domestic demand in May, 1929. It is clear that a continued lack of export business would have a substantial effect on the volume of gasoline shipped by refiners.

Assuming an increase of 8 per cent in total refinery shipments of gasoline the last half of this year, we find demand then to be 244,662,000 barrels, as compared with 226,539,000 barrels the last half of 1929.

Refinery stocks of gasoline July 1 are estimated at about 50,785,000 barrels, on the basis of A. P. I. reports. This is an increase of 7,670,000 barrels in the first half of the year, and an increase of 17,719,000 barrels over stocks at the opening of 1929.

To liquidate the 17-million-barrel increase in stocks of the last 18 months by Dec. 31, refiners would have to limit their production of gasoline to about 226,943,000 barrels in the last half of the year instead of pro-

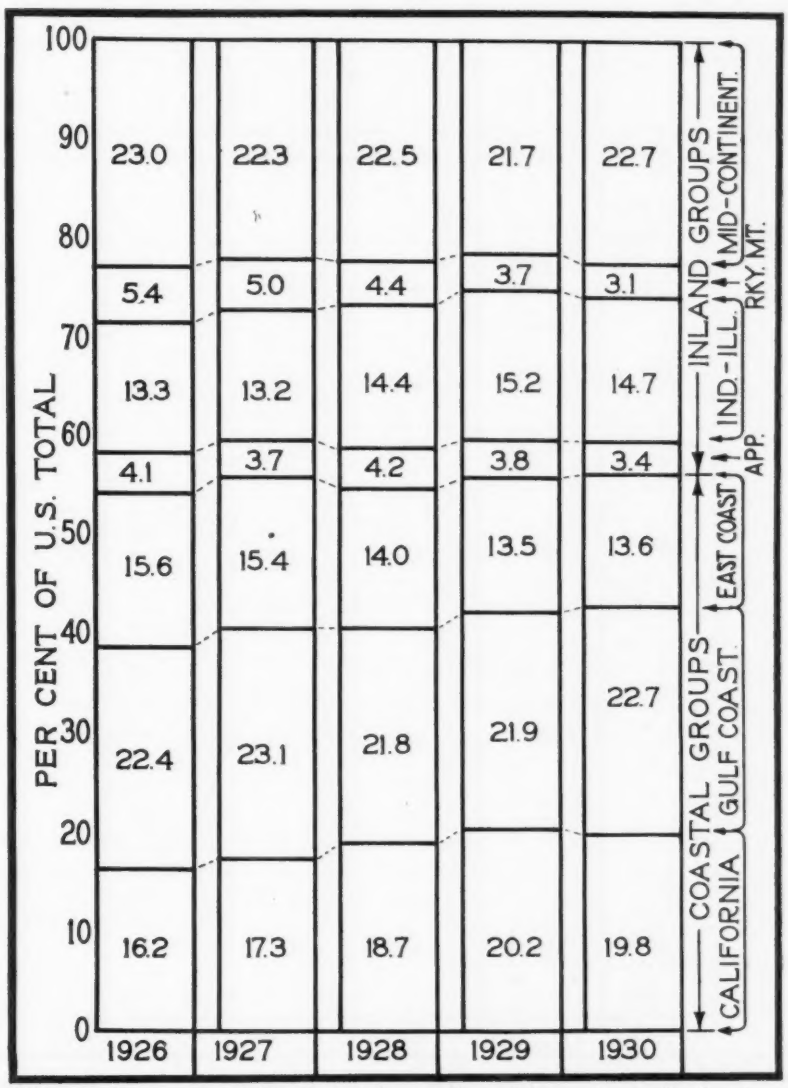


Fig. 1—Per cent of U. S. total gasoline shipments made by important refining groups by years from 1926. Figures for 1930 cover first five months only

ducing the 244,662,000-barrel indicated demand.

Total refinery shipments the last half of 1929 were 226,539,000 barrels and production 227,663,000 barrels. So refinery output of gasoline would have to be held well below the 1929 level for a full six months to wipe out the overproduction of the previous 18 months.

Since gasoline yield per barrel of crude run is increasing, the effect on crude runs of such a liquidation program would be even more pronounced. Current yields of gasoline are averaging about 46.5 per cent, as compared with about 44 per cent in 1929.

On the basis of present yields, crude runs of all U. S. refineries would have to be held to 2,653,000 barrels per day average for six months, or 71.9 per cent of total refinery capacity of 3,686,000 barrels, to liquidate the gasoline stock additions of the last 18 months. This rate of operations is slightly higher than that indicated by A. P. I. reports for the weeks ended July 12 and 19, after the new curtailment movement started, but is far below the level of operations maintained in June and previous months.

Table I

Crude Run to Stills

Daily average, barrels, for refining groups, based on American Petroleum Institute reports.

	June 1-28	July 5-19	Per cent Ch'ge
East Coast	511,475	482,700	—5.6
Appalachian ..	81,625	84,650	+3.7
Ind., Ill., Ky...	328,200	313,350	—4.5
Okla., Kans., Mo.	293,000	273,600	—6.6
Texas	603,300	543,300	—9.9
La., Ark.	170,825	173,750	+1.7
Rocky Mtn.....	63,900	60,950	—4.6
California	595,200	546,200	—8.2
U. S. Total.....	330,941	309,813	—6.4
Texas (Gulf Coast)	450,575	395,250	—12.3
La. (Gulf Coast)	119,850	116,150	—3.1

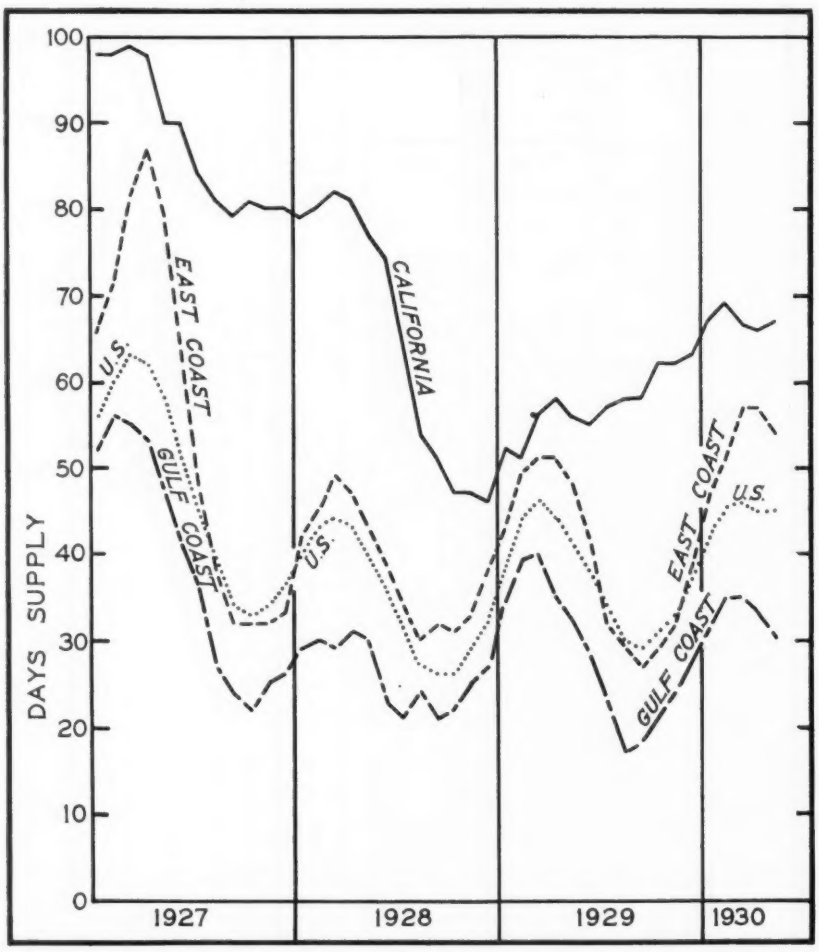


Fig. 2—Gasoline stocks of coastal refining groups and U. S. total in terms of days' supply at the close of each month since January, 1927. Days' supply is based on average demand for 12 months preceding the close of each month

One of the chief dangers at present is that the various refining groups have not reduced their runs on the same scale. It is human nature to feel aggrieved and retaliate in kind when it is apparent that some competitor, or group of competitors, is not following sound practices.

No one likes to lose business to a competitor. In the oil business, particularly, it seems that many companies would rather sell at a loss than let a competitor have the business, even temporarily. That is largely true because of the difficulty in recovering business once it has gone to another competitor or group of competitors.

Table 1 gives daily average crude runs to stills by refining groups in the two weeks ended July 19, compared with daily average runs for the four weeks ended June 28, as reported by the American Petroleum Institute.

The shift in gasoline business between various refining groups is illustrated in Fig. 1, a chart showing the per cent of all refinery shipments of gasoline originating in each of the major groups from 1926 to date. The chart shows inland groups have shipped 43.9 per cent of the total the first five months of this year and coastal groups 56.1 per cent of the total.

In the 1926 inland refining groups shipped 45.8 per cent of all refinery gasoline shipments. Coastal groups then shipped 54.2 per cent of the total.

Within these major divisions, the important groups show important competitive shifts. East Coast has lost steadily and now does 2 per cent less of the nation's gasoline business than in 1926. California, in 1929, did 4 per cent more of the nations gasoline business than in 1926, but this year has been showing a loss under 1929.

In the inland groups, the Rocky Mountain and Appalachian districts have lost steadily, while Indiana-Illinois refineries have gained. The Mid-Continent gained back the first five months of this year, some of the business previously lost to Indiana-Illinois.

Table 2 gives in detail production and shipments of gaso-

Table 2

Refinery Gasoline—First Five Months, 1929 and 1930

(Thousands of Barrels)

	PRODUCTION			SHIPMENTS			STOCKS—MAY 31		
	1929	1930	Per cent Increase	1929	1930	Per cent Increase	1929	1930	Per cent Increase
East Coast	22,656	26,223	15.7	20,975	23,438	11.7	7,218	8,848	22.6
Appalachian	6,657	6,480	2.7*	6,188	5,894	4.8*	1,698	1,969	16.0
Ind., Ill.	25,084	28,399	13.2	23,065	25,368	10.0	7,118	8,665	21.7
Mid-Cont.	36,758	41,106	11.8	34,750	39,137	12.6	6,678	7,734	15.8
Gulf Coast	37,900	39,887	5.2	36,305	39,192	8.0	7,637	7,846	2.7
Rocky Mt.	6,931	5,859	15.5*	6,039	5,312	12.0*	2,460	2,881	17.1
California	34,986	35,366	1.1	32,068	34,060	6.2	11,839	16,091	35.9
U. S. Total	170,972,000	183,320,000	7.2	159,390,000	172,401,000	8.2	44,648,000	54,034,000	21.0

*Decrease

line the first five months of 1930, compared with 1929. It shows also the change in stocks May 31 this year, over last, by groups.

In terms of days' supply gasoline stocks at U. S. refineries, May 31, were greater than the same date in 1929 or 1928, but were substantially less than May 31, 1927. On the basis of daily average shipments for 12 months ending May 31, stocks then were 45 days' supply. Last year stocks represented 41 days' supply; in 1928, 40 days' supply and on May 31, 1927, 58 days' supply.

Only one group in the U. S. May 31, this year, had lower stocks in terms of days' supply than last May. This was the Gulf coastal group which held 30 days' supply this year and 32 days' supply last. The Mid-Continent held 29 days' supply May 31 as compared with 28 days' supply on May 31, 1929.

California stocks of gasoline, in terms of days' supply, have been rising steadily since December, 1928, when they stood at 46 days. On May 31, 1929, California stocks were 56 days' supply, and on May 31 this year were up to 67 days' supply.

Fig. 2 shows the course of gasoline stocks in terms of days' supply at coastal refining groups and the United States as a whole from January, 1927, to May 31, 1930. Fig. 3 gives the same information for all inland groups.

Among the coastal groups the Gulf coast has the lowest stocks and California the highest. In the inland groups the Mid-Continent has the lowest stocks consistently and the Rocky Mountain the highest. Indiana-Illinois stocks consistently have stayed above the Mid-Continent and about the same as those in the Appalachian region.

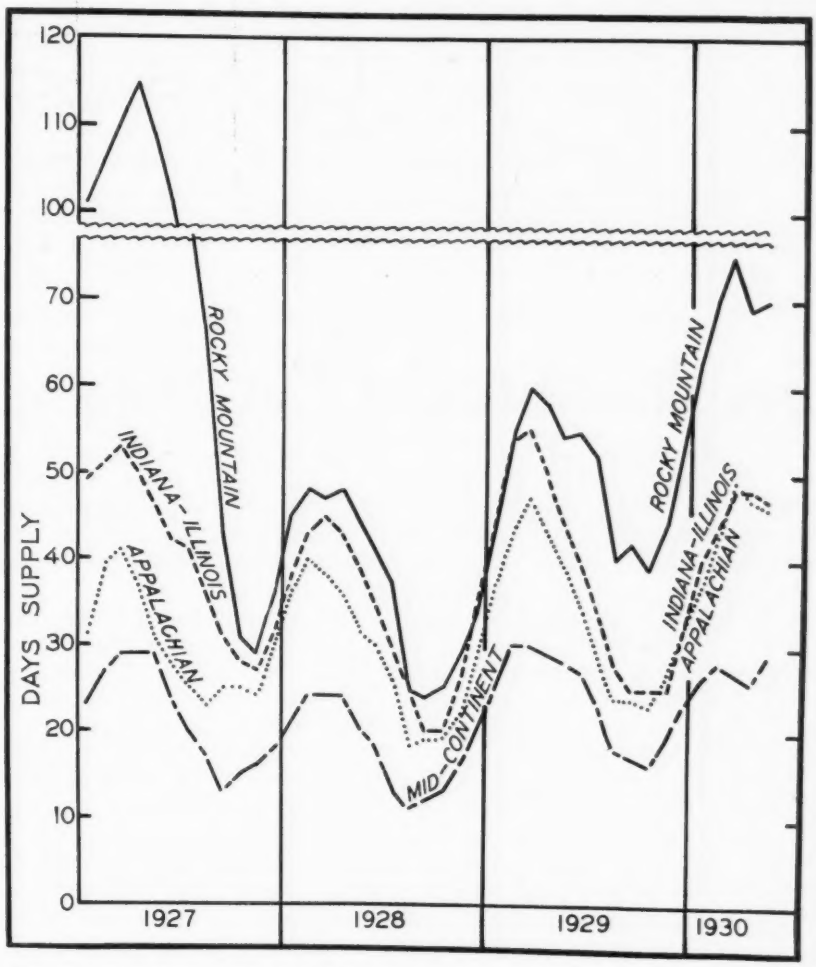


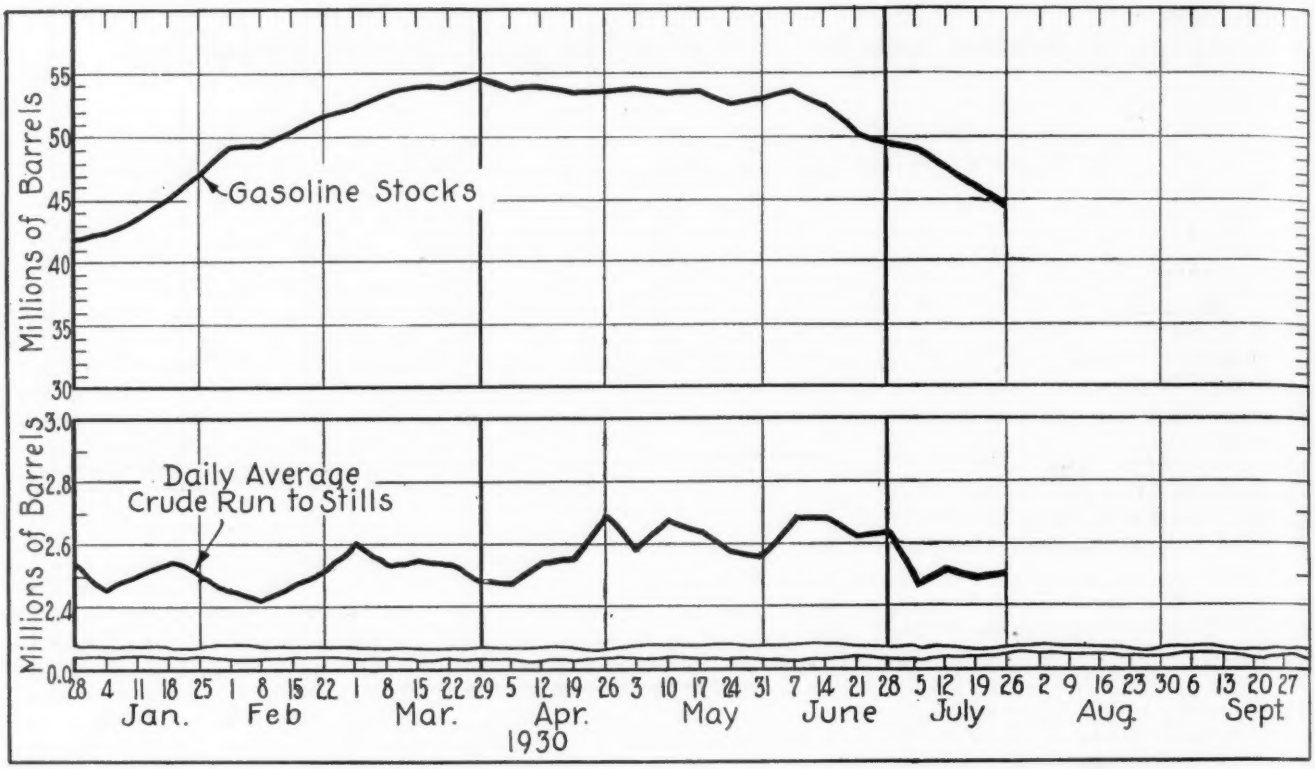
Fig. 3—Gasoline stocks of inland refining groups in terms of days' supply

North Dakota Votes Down Increase in Gas Tax

NEW YORK, July 26.—Thumbs down on a tax increase in North Dakota was voted decidedly at the primaries of June 25 in that state, the tax increase plan losing in every district, according to the American Petroleum Institute.

North Dakota was among the first states to adopt a gasoline tax, a 1 cent levy being imposed in 1919. The increase voted on recently was for a raise of 1 cent, from 3 to 4 cents.

U. S. Crude Runs and Gasoline Stocks as Reported Weekly by A. P. I.



Gasoline Stocks Cut Again, 1,000,000 Bbls.

By Telegraph

NEW YORK, July 29

FOR the sixth consecutive week, gasoline stocks were reduced, according to the American Petroleum Institute weekly survey of refining operations. Stocks dropped 1,186,000 barrels for the period ended July 26 at plants totaling 95.7 per cent of the countrys' operating capacity.

The only district to add to gasoline stocks was California, where there was an increase of 37,000 barrels. East Coast plants reduced stocks by nearly 250,000 barrels; Indiana, Illinois and Kentucky district by 225,000 barrels; Oklahoma, Kansas and Missouri by 172,000 barrels and Texas by 271,000 barrels.

Crude runs to stills increased 72,600 barrels for the country. Texas, Oklahoma, Kansas and California increased runs. Oklahoma-Kansas gained 13,000 barrels and reporting plants were running at 67.7 of capacity, compared with 64.6 per cent the previous w e e k . Texas gained 41,000 barrels, at 81.7 per cent of capacity, compared with 76 per cent the previous week and California increased 54,000 barrels in crude runs to stills, to 64.2 per cent of capacity, compared with 58.2 per cent the week before.

Gas and fuel oil stocks gained 156,000 barrels for the country. East Coast gained 215,000 barrels; Appalachian district gained 92,000 barrels; Indiana, Illinois, Kentucky gained 161,000 barrels; Oklahoma-Kansas reduced by 50,000 barrels; Texas by 156,000 barrels; California reduced by 159,000 barrels.

Current Refinery Operations

Districts	Per Cent Capacity Reporting	Daily Average Crude to Stills (Barrels) Week Ended July 26	Daily Average Crude to Stills (Barrels) Week Ended July 19	Per Cent of Reporting Capacity Operated Week Ended July 26	Per Cent of Reporting Capacity Operated Week Ended July 19	Stocks (Thousands of Barrels) Gasoline July 26	Stocks (Thousands of Barrels) Gasoline July 19	Stocks (Thousands of Barrels) Gas & Fuel Oil July 26	Stocks (Thousands of Barrels) Gas & Fuel Oil July 19
East Coast	100.0	488,700	490,400	80.3	80.6	7,354	7,601	9,757	9,542
Appalachian	91.8	77,800	86,400	66.2	73.5	1,467	1,572	1,042	950
Ind., Ill., Ky.	99.6	295,900	309,300	77.7	81.2	7,363	7,587	4,403	4,242
Okla., Kans., Mo.	89.9	281,600	268,600	67.7	64.6	3,837	4,009	4,671	4,722
Texas	90.4	582,600	541,700	81.7	76.0	6,476	6,747	10,182	10,338
La., Ark.	96.8	164,900	171,400	62.9	65.4	1,977	2,082	1,927	1,880
Rocky Mountain	93.6	54,800	59,500	39.4	42.7	2,481	2,580	1,204	1,197
California	99.3	572,300	518,700	64.2	58.2	13,796	13,759	106,083	106,242
Total	95.7	2,518,600	2,446,000	71.4	69.3	44,751	45,937	139,269	139,113
Texas (Gulf Coast)	100.0	429,900	392,900	81.7	74.6	5,253	5,582	7,155	7,290
La. (Gulf Coast)	100.0	106,100	114,900	71.9	77.9	1,589	1,709	1,068	1,064

Five Months' Gasoline Consumption Levels Off at 10.5%

Cleveland, July 26

ACCORDING to the state gasoline tax returns the increase in gasoline consumption in May, over a year ago was 4.46 per cent, the smallest increase on record.

On the basis of the tax returns, gasoline consumption in 43 states in May was 30,533,000 gallons daily average, which was 511,000 gallons under April daily average consumption from the same source.

This low rate of increase in May brings the rate of gain in the five months of 1930 over first five months of 1929 down to 10.5 per cent, which is still believed to be somewhat over the actual rate of increase in actual consumption of motor gasoline this year.

The exceedingly low rate of increase for May is explained by the fact that the gasoline tax returns in most states, reflect volume of tank car receipts by marketers, rather than actual retail sales. There was considerable storing of gasoline the early part of the year in many states against later actual consumption. This gasoline during May was believed placed in distribution, cutting down on receipts of new shipments.

Following are the reasons for the exceptionally high increases in gasoline consumption in certain states early in the year, as ascertained by NATIONAL PETROLEUM NEWS from marketers and officials of state marketing organizations in those states.

Wisconsin, with a gain of about 40 per cent in the first four months over the corresponding period of 1929, had exceptionally good motoring weather and market conditions encouraged large storage through the state, said H. A. Rhode, of Rhode-Deuster-Hinkley Oil Co., West Allis, Wis., and secretary of the Wisconsin Petroleum Association.

Added to these factors were the completion of through-state roads, the Wedhams Oil Corp., Milwaukee, reports.

"Concerted action by counties in keeping highways open during the winter" is the explanation given by Solomon Levitan, Wisconsin state treasurer.

Minnesota — "Increased inshipments of gasoline caused by better roads, increased use for

May, and Five Months', Gasoline Consumption, from State Tax Reports

(Figures in thousands of gallons)

	April 1930	May 1930	May 1929	% Change over May 1930	5 Months Ended May 1930	5 Months Ended May 1929	% Change
Alabama	15,316	15,083	16,100	— 6.32	70,821	68,791	+ 2.95
Arizona	6,927	6,444	5,983	+ 7.71	31,954	28,496	+12.13
Colorado	15,977	14,620	11,663	+25.35	63,740	59,189	+ 7.69
Connecticut	18,470	19,697	18,626	+ 5.75	80,364	68,554	+17.23
Delaware	3,107	3,171	2,898	+ 9.42	13,228	11,352	+16.53
District of Columbia	6,778	7,162	6,493	+10.30	30,577	27,551	+10.98
Florida	19,684	18,183	18,554	— 2.00	104,536	101,859	+ 2.63
Georgia	19,130	18,814	18,916	— 0.54	89,659	83,730	+ 7.08
Idaho	5,295	5,525	4,982	+10.90	20,291	15,841	+28.09
Indiana	40,133	42,089	39,280	+ 7.15	172,366	161,650	+ 6.63
Iowa	36,246	32,075	31,644	+ 1.36	147,083	115,108	+27.78
Kansas	32,843	30,380	31,119	— 2.37	141,365	123,624	+14.35
Kentucky	14,282	15,163	13,975	+ 8.50	62,076	54,095	+14.75
Louisiana	16,397	15,249	14,915	+ 2.24	73,922	67,247	+ 9.93
Maryland	14,668	14,266	14,495	— 1.58	63,677	57,550	+10.65
Massachusetts	45,024	47,881	46,974	+ 1.93	193,578	171,715	+12.73
Michigan	68,352	74,214	70,084	+ 5.89	293,245	274,804	+ 6.71
Minnesota	35,616	32,838	34,950	— 6.04	139,195	120,550	+15.47
Mississippi	12,253	12,067	12,783	— 5.61	56,910	54,616	+ 4.20
Missouri	38,041	37,080	34,762	+ 6.67	163,871	140,558	+16.59
Montana	10,020	10,000	9,821	+ 1.82	29,052	22,440	+29.46
Nebraska	19,925	17,798	18,855	— 5.61	87,213	94,365	— 7.58
Nevada	1,500	1,614	1,315	+22.74	6,271	5,586	+12.26
New Hampshire	4,932	5,712	5,188	+10.10	19,380	15,905	+21.85
New Jersey	43,655	49,590	43,759	+13.32	198,350	174,121	+13.91
New Mexico	4,679	4,458	3,699	+20.52	20,161	15,900	+26.80
North Carolina	17,828	20,343	22,663	—10.24	98,713	102,667	— 3.85
North Dakota	17,170	11,914	15,850	—24.83	41,758	46,115	— 9.45
Ohio	84,934	94,577	82,914	+14.07	375,827	347,418	+ 8.18
Oklahoma	28,300	26,382	25,894	+ 1.88	123,482	115,571	+ 6.84
Oregon	15,355	14,543	13,867	+ 4.87	60,035	54,607	+ 9.94
Rhode Island	(a)7,778	7,200	7,048	+ 2.16	31,888	26,237	+21.54
South Carolina	9,735	10,349	10,005	+ 3.44	46,842	45,210	+ 3.61
South Dakota	14,157	12,237	13,336	— 8.24	51,289	42,943	+19.43
Tennessee	18,179	18,804	17,002	+10.60	80,247	69,208	+15.95
Texas	64,882	67,881	62,709	+ 8.25	307,703	286,706	+ 7.32
Utah	5,847	5,521	5,552	— 0.56	22,717	19,388	+17.17
Vermont	3,076	4,287	3,954	+ 8.42	12,967	11,434	+13.41
Virginia	19,041	20,658	18,322	+12.75	84,069	73,710	+14.05
Washington	25,253	23,216	22,588	+ 2.78	100,028	89,995	+11.15
West Virginia	11,555	13,139	11,158	+17.75	47,562	40,946	+16.16
Wisconsin	35,801	41,164	38,163	+ 7.86	149,293	119,882	+24.53
Wyoming	3,170	3,136	3,293	— 4.77	11,952	10,570	+13.07
Total	931,311	946,524	906,151	+ 4.46	4,019,257	3,637,804	+10.49
Daily Average	31,044	30,533	29,231	+ 4.46	26,618	24,091	+10.49
Illinois	78,870	88,502	.....	.....	.....	.....	.....
New York	124,443	.....	107,489	.....	.....	.....	.....

(a)—Revised

agriculture, manufacturing, railroads and airplanes," says H. R. Chase, deputy chief oil inspector.

South Dakota—"Very extensive road program carried out last 18 months, mild weather conditions, all through-roads kept open, extensive advertising of Black Hills, large share of tractors using gasoline and heavy farm acreage in March and April," resulted in a large increase, according to a Standard Oil Co. of Indiana agent. This same view is shared by the state highway commission.

Iowa's increase of nearly 38 per cent the first four months was due to the fact that "last year this section of the country was practically snowed in and business in the country districts at a standstill," according to A. L. Lommel, president, Bartles-Shepherd Oil Co., Waterloo. This year roads were open and the winter was mild.

A "beehive of surveyors swarming over Iowa," says B. H. Gholson, of the Dutch Mill Service Co., Knoxville, Ia., "surveying new roads and grading for paving outfits," used considerable gasoline in Iowa and the company's own 20 per cent increase was due largely to this source.

The Davenport Oil & Supply Co. says, according to B. J. Gerwe, president and general manager, sales at its superstation up to June 1 increased 102 per cent but in June fell off to 69 per cent. Iowa is just beginning to feel the business depression, Mr. Gerwe says. A road building program and the fact that many Iowa motorists trade at home now who formerly drove across the border to Illinois when the latter state had no gasoline tax, also increased sales in Iowa.

Missouri — Weather conditions in April were ideal for motoring, George S. Allee, president of the Missouri Oil Men's Association, says, while weather was bad for nearly three weeks in May. The tank car market was attractive and many jobbers filled their storage which eliminated additional purchases in May, he says. Airplanes also used more gasoline from month to month.

For the first five months this year, gasoline tax was paid on 165,305,172 gallons, compared with 140,530,549 gallons in 1929, a gain of about 17.6 per cent, Mr. Allee points out.

Kansas—More farmers turning to power and increased activity in farming are the causes for increase in gasoline demand, says J. A. Motter, secretary of the Kansas Oil Men's Association, Wichita. That state harvested about 4,000,000 acres more wheat than in any previous year.

Connecticut — Exceptionally favorable weather conditions and a change in automobile registration laws allowing prorating of fees each month, instead of beginning with April, are possible reasons for large gasoline gallonage in that state, says Robbins B. Stoeckel, commission of motor vehicles. More cars were on the roads the first four months of the year, he says, due to the changed law.

New Hampshire — Better winter roads and more automobiles resulted in greater gasoline consumption, C. T. Patten, commissioner, points out.

Rhode Island—A change in the gasoline tax law allowing exemptions, which was an open door for tax dodging and under-selling, W. Wheaton Tillinghast, in charge of fuel tax division of Rhode Island says, effected a 30 per cent increase in gasoline sales this year. Half this increase, he says, is due to increased registration and heavy travel over good new four-line roads.

Aged Oil Writer Dies

TULSA, July 28.—Horatio L. Wood, widely known oil writer, died Saturday at the home of a caretaker here. He had been bedfast for nearly a year. He was seventy-nine years old. Surviving him are two sons and a daughter. He was buried in Tulsa. Col. Wood, as he had been known for years, was the first editor of the Oil and Gas Journal, and a staff writer on other oil publications and for the oil pages of newspapers in the southwest. At one time he was on NATIONAL PETROLEUM NEWS editorial staff.

Indiana Seeks Further Self Service Curb

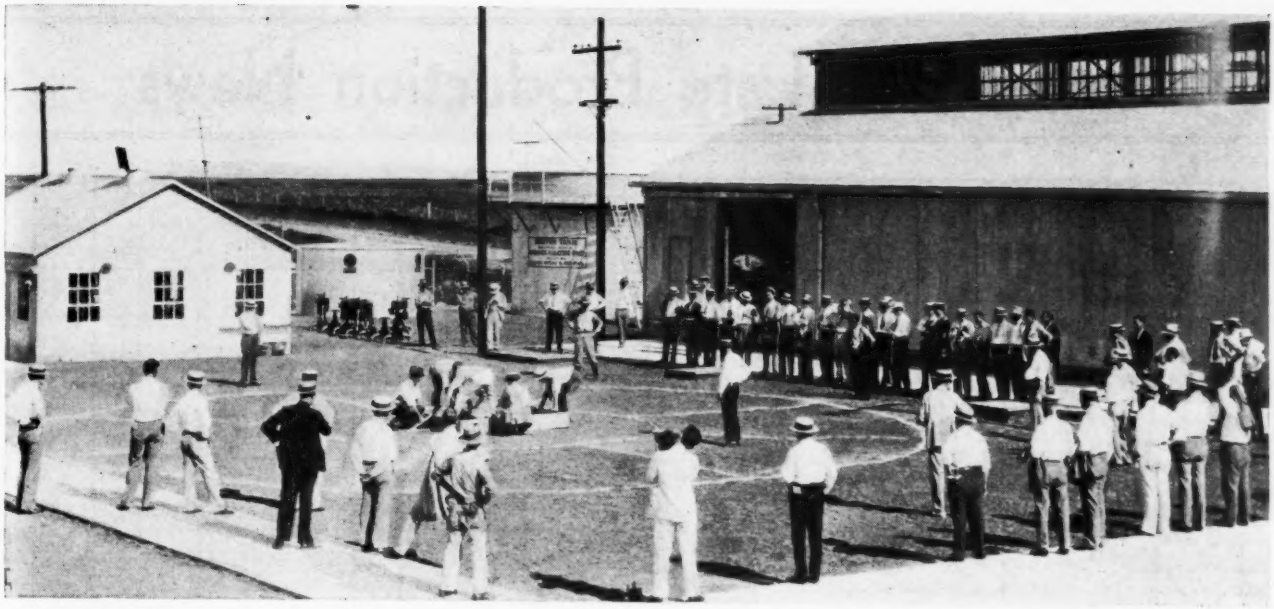
CLEVELAND, July 25.—A ruling instructing railroads, on notice from the state fire marshal, not to deliver gasoline to any public gasoline station where persons other than the owner or his employe are permitted to handle gasoline, has been issued by State Fire Marshal of Indiana Alfred Hogston.

This order went into effect July 20 after two self service stations in Indiana continued to operate as such, although Marshal Hogston put into effect June 1, a rule to prohibit the handling of gasoline at public filling stations by persons other than the station owner or his employe. The rule was promulgated on the theory that promiscuous handling of gasoline was a fire hazard.

The substance of the earlier rule is incorporated in the new order. The paragraph pertaining to railroads follows:

"No railway tank car containing gasoline or any other inflammable liquid shall be unloaded or emptied through or by means of any pipe line, pump, siphon or any other means or method into any tank or tanks which are in any way directly or indirectly connected with, constitute in any sense a part or auxiliary of, or are used as storage for or the replenishing tank or station for any public gasoline filling station where automobile or other motor vehicle tanks or any drums, barrels, or other containers are filled or partially filled or are permitted to be filled or partially filled by the public or by any person or persons except the owner or operator of such station or a regularly employe and servant of such owner or operator, or any public gasoline filling station which has been installed in violation of any rule, regulation or order of the state fire marshal department or is operated in any way in violation of any rule, regulation or order of the state fire marshal department; and no railway company or other common carrier shall in any case or instance permit any such unloading or spot or set any car for any such unloading in violation of or contrary to this regulation after being officially notified by the state fire marshal of any such violation or violations in any such case or instance."

Similar restrictions are imposed on wholesale gasoline dealers who might deliver gasoline to self serve stations by tank truck. The order also would prohibit, on notice from the station fire marshal, any person, firm or corporation from selling gasoline to any wholesaler who supplied a self-service station.



Terrapin racing was on the program at a meeting of the transportation committee of the Tulsa petroleum exposition with representatives of the railroads and air lines, held on the exposition grounds at Tulsa

Traffic Men at Home at Terrapin Race

TULSA, July 26

PLANS for the transportation of visitors who attend the National Petroleum Exposition and Congress here Oct. 4 to 11, were worked out at a meeting July 25 between the transportation committee of the exposition and some 60 representatives of major railroads and air lines.

The committee acquainted the rail and air line men with the scope of the exposition, and received in return the assurance of full co-operation in pre-exposition advertising by the passenger carriers, as well as co-operation in handling the traffic. A. F. Winn, traffic manager of Skelly Oil Co., is chairman of the transportation committee.

The visitors were guests of the Chamber of Commerce at luncheon, after which they were taken to the exposition grounds.

It was hot, but Barney Horrigan, director of the exposition and master of ceremonies for the afternoon, apparently had anticipated the weather, for he had a bountiful supply of cool refreshments on tap.

An archery contest and terrapin race were on the program, between two of the main buildings and at least 50 feet from any shade.

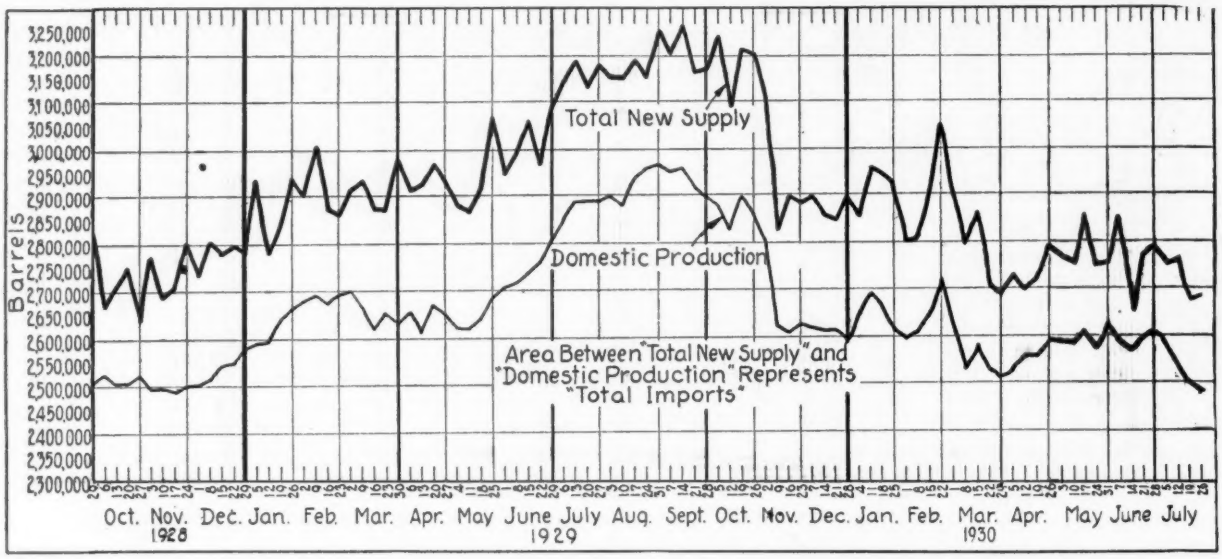
Bets were finally placed on the turtles, however, and the race was staged. The winner paid $66 for $1 in mutual betting.

The archery contest developed considerable merriment and moisture. W. G. Skelly, president of Skelly Oil Co., and of the exposition, was given the honor of releasing the first arrow at the target. His arrow wavered in mid-air, and although he was only 20 feet from the impressive target, the arrow dribbled, then skimmed along the ground, almost to the base of the target. However, no direct hits were registered during the contest and there were a few worse shooters than Mr. Skelly.

—Howard photo

Fred W. Insull, (left), W. G. Skelly, J. W. Eyrne and Harry Norris snapped as they were witnessing the terrapin race

Review of Late Production News



Daily Average Crude Oil Production and Imports Based on Current Reports of American Petroleum Institute

Texas, New Mexico, Louisiana

EVENTUAL construction of a pipeline lateral tapping the Hobbs district of New Mexico by Magnolia Petroleum Co., is indicated by surveys under way. An 8-inch lateral 60 miles long, connecting with the Magnolia's West Texas trunk system at Midland is proposed. Magnolia has no acreage in the Hobbs district, hence it is believed the lateral will be used for handling oil from partnership properties of Texas Unity Oil Co., subsidiary of the Warner-Quinlan Co., and the Landreth Production Co. Warner-Quinlan will want 10,000 barrels daily from Hobbs field after Oct. 1.

The Railroad Commission of Texas has issued an order limiting Judkins district production, in Ector county, Texas, to 15,000 barrels daily. Marketed quantities of crude will be in line with buying commitments, now estimated at about 14,000 barrels daily.

Loring Oil Co.'s No. 1 Gardner, 27-8-12, Sabine parish, Louisiana, is the Zwolle district's largest completion. At 2310 feet it flowed 2000 barrels daily through one-quarter inch choker and is estimated good for 10,000 barrels, or more, open flow.

Current production in this country by pools is found on page 105.

California

DEVELOPMENTS increased in Los Angeles Basin fields of Playa del Rey, Potrero and Long Beach. Profitable exploitation of deep sands at Long Beach resulted in 30 new locations during past fortnight with approximately half a dozen wells due for production tests within week.

An Elwood tideland well was completed for 4000 barrels. Reports from several wildcats in this area were not encouraging. A new test is to be made of the Golesta district following failure to develop commercial production in General Petroleum Corp.'s Crandall project.

Oklahoma, Kansas

WILDCATS broke out all over the Mid-Continent during the past week. Some of them indicated new pools though others furnished just geologic information. Payne, Kay and Hughes counties in Okla., all had interesting outside wells. Most of the major pools of the state were active and extended though the Oklahoma City pool led with the best producers as usual.

The Schurr pool of Rice county, Kansas, may extend nine miles north if a late wildcat is any indication. This well is on the same trend and producing from the same horizon. The Eastborough pool on the outskirts of Wichita now has Wilcox production and a drilling play is getting well under way.

Wyoming, Montana

MIDWEST Refining Company has spudded in a wildcat on the Pendroy structure in northern Montana. The Barthelote dome discovery well is good for about 70 barrels per day.

The Ohio Oil Co. discovery well in the Byron field, northwestern Wyoming, producing from the Tensleep sand, is good for 500 barrels per day.

Argo Oil Co. has half million feet of gas at 2864 feet in its deep test in the Mule Creek field, eastern Wyoming.

Darst Creek Overrides Proration, Texas Program in Danger

By Paul Wagner

N. P. N. STAFF WRITER

HOUSTON, July 26

ON THE eve of a railroad commission hearing at Austin, July 30, when statewide curtailment of flush oil production will be "before the house," the Texas petroleum industry is confronted with its most serious problem since prorating practice began three years ago.

In the Darst Creek field, of the Luling fault zone, central south Texas, prorating "went by the boards" and the week ended with exploitation between 65,000 and 75,000 barrels daily.

The Darst Creek situation constitutes on the one hand a challenge to the enforcement by the railroad commission of its prorating orders and, on the other hand, it creates a threat against maintenance of the crude oil price structure in the southwest.

Darst Creek production under proration, had been set at 20,389 barrels daily in July, but its quota had been exceeded consistently by Louisiana Oil Refining Corp., of Shreveport, which told the railroad commission its contract with the United North & South Developing Co., required 4500 barrels daily exploitation. The "Loreco" prorating allowance was 2332 barrels daily.

Harrison Oil Co., and J. S. Abercrombie, Inc., operating as a partnership and owning producing properties adjoining "Loreco," obtained a temporary injunction against railroad commission enforcement of prorating practice, July 22. The next day they opened their wells to approximately 4000 barrels daily.

Although not parties to proration at Darst Creek, the Harrison & Abercrombie interests had not previously exploited their properties, awaiting completion of tank car loading racks for shipping their production by rail to Houston.

Continued exploitation of "Loreco" properties beyond their proration quota, and the injunction obtained by the Harrison - Abercrombie interests have forced other Darst Creek operators to guard their properties against drainage by producing more than their proration allowances.

Gulf Production Co. opened its wells offsetting "Loreco" and Harrison - Abercrombie properties. Then the Texas Co., and the Magnolia Petroleum Co. began opening up and the Humble Oil & Refining Co. followed.

For the most part, oil company pipe lines were handling only their own production, although the Texas Co. continued to run proration quantities of oil for operators with whose leases its facilities were already connected.

The end of the week found the Texas Co. producing 9170 barrels daily and running 12,066 barrels, compared with proration allowance of 5787 barrels. Gulf Production Co. was exploiting 13,033 and running 12,066 barrels, with an allowance of 4028 barrels. Magnolia Petroleum Co. produced 10,634 barrels and ran 9209 barrels as against allowance of 2080 barrels. Humble Oil & Refining Co. produced 14,000 barrels daily, compared with 3204 barrels allowance.

Sun Oil Co. produced and ran 1147 barrels daily to the Texas Co.'s pipeline; Stroube & Stroube produced 142 barrels and ran 432 barrels. Most other operators shifted for themselves as best they could. Empire Gas & Fuel Co. made no runs.

After the July 2 hearing at Austin, when "Loreco" declared its operating intentions, the railroad commission issued an order, effective July 15, invoking proration under both the old Texas law prohibiting physical waste and the new common purchaser or pipeline statute, which seeks to enforce equitable takings of crude from fields and properties throughout the state. Later, the effective date of the order was made August 1. Meantime, except for "Loreco" exploitation, prorating practice was observed until opening of wells under the Harrison-Abercrombie injunction and the subsequent breakdown on the part of others.

Ultimate outcome of the situation may be far-reaching. It will test the new common purchaser or pipeline law, at least insofar as it affects the railroad commission's authority to tell operators that they may not produce oil in excess of proration quantities fixed under state orders.

That point was especially stressed in the Harrison-Abercrombie petition on which temporary injunction issued, plaintiffs setting up that total allowables were made to depend on market outlet created by nominations of purchasers whose actions were in no wise controlled by the commission.

Somewhat similar issues are involved in prorating the Judkins district of Ector county, West Texas, where the commission, by order effective Aug. 1, limited production to 15,000 barrels daily. There, market nominations so far made aggregate only 10,000 barrels, which is 2000 barrels less than the "irreducible minimum" to which Landreth Production Co. feels it can adhere.

Meetings among Ector producers continue, and also in the

Panhandle and Wichita Falls territory, concerned with the statewide curtailment program recently inaugurated in connection with the industry's recommendation for enforcement of the common purchaser law.

At Dallas, July 25, another meeting of the Mid-Continent Oil & Gas Association's Texas division steering committee voted to send telegrams to the four major importers calling on them to curtail production and shipments from Venezuela in proportion to Texas curtailment. The companies, which import 98 per cent of the crude shipped in, are the Shell Union Oil Corp., Standard Oil Co. of Indiana (Pan American Petroleum & Transport Co.), Gulf Oil Corp., and Standard Oil Co. of New Jersey.

Although last week's American Petroleum Institute figures showed Texas production down to 821,100 barrels, as compared with 863,400 barrels earlier in July, the present Darst Creek output will bring current daily average above 850,000 barrels.

Proposed statewide curtailment of flush fields under the Texas industry's recommendations for enforcement of the new pipeline act calls for exploitation of 746,950 barrels, or whatever additional cut is necessary to balance production with market demands.

Should the state commission fail to enforce its proration order at Darst Creek it would be similarly embarrassed in application of orders elsewhere in flush fields, notably West Texas.

Many analysts of the law consider it unconstitutional, but the interests they represent have in the past taken the position that it forms a mandate to the railroad commission under which to enforce much needed proration; and they have been willing to defer testing its constitutionality in the interest of general curtailment of recognized over-production.

The railroad commission is said to regard its hands as tied until formal request can be made through the attorney general for dissolving of the injunction of Harrison & Abercrombie. It is said this would require at least 10 days.

Meantime, the southwestern industry is faced with the specter of crude oil price reductions through the throwing of unwanted quantities of oil on an already glutted market. Purchasing agencies, it is said, will not dare, under the common purchaser law, to direct price penalties against Darst Creek field alone, but will find it necessary, should price cuts materialize, to reduce schedules conformably throughout the state.

Meantime, Continental Oil Co., which has been purchasing approximately 5000 barrels of crude daily in the Wichita Falls district, announces that, effective August 1, it will reduce takings 50 per cent from wells now served. No new connections are to be made.

Effective July 24, Prairie Oil & Gas Co. changed its proration of Wichita Falls district purchases so that smaller wells will get an advantage over flush production, without changing the total quantity of crude run. Runs for wells that produce five barrels or less daily will be on a 100 per cent basis; from 6-25 barrels, 80 per cent; 26-50 barrels, 70 per cent; 51-100 barrels, 60 per cent; more than 100 barrels, 56 per cent.

In Howard-Glasscock counties, effective July 20, Cosden Oil Co., Inc., adopted a temporary storage policy, buying half and storing half its runs from others. A storage charge of 1½ cents a month per barrel is applied. Cosden has been running about 7000 barrels daily from Howard-Glasscock fields and charging 5000 barrels of this grade to stills daily.

The Harrison-Abercrombie interests, who set up that their facilities were constructed for handling their own production solely, take the position they are not common purchasers; also that the railroad commission is without power to rule that "no oil shall be produced during any proration period in excess of (nominated) market outlet" as provided in its order fixing Darst Creek allowable yields at 20,389 barrels daily.[1]

Their petition pointed out that the operation of the state commission's order and of the proration scheme depends upon the initial act of the several purchasers of oil in the Darst Creek field who may nominate the amount of oil they will purchase from the field during each calendar month.

They set forth that the production of the field is based upon this nomination of the purchasers, and that their action is not controlled by the railroad commission. Therefore, they set forth:

"The necessary effect of said order is to give the said purchasers of oil full control over the production of oil in said field because, under said order, the amount of oil that can be produced in the field is made to depend wholly upon the initial, uncontrolled action of said purchasers in nominating how much oil they will purchase."

They also attacked the method of determining permissible production under Darst creek prorating practice, which conforms generally to the system applied in West Texas fields under curtailment as arbitrary and discriminatory.

In the case of the four wells on the Harrison-Abercrombie 20-acre unit, it was set up, the "average daily potential production" would be 1625 barrels, and not 6500 barrels, it was set forth.

The Harrison-Abercrombie interests also alleged the commission's proration order is an attempt to regulate economic waste in the production and marketing of oil—a power the exercise of which has been prohibited by the legislature of Texas.

"There is in fact no actual physical waste in the production of oil in said field and that the only waste occurring is economic waste created by world-wide over-production of oil and the marketing conditions which result from such overproduction," their petition stated.

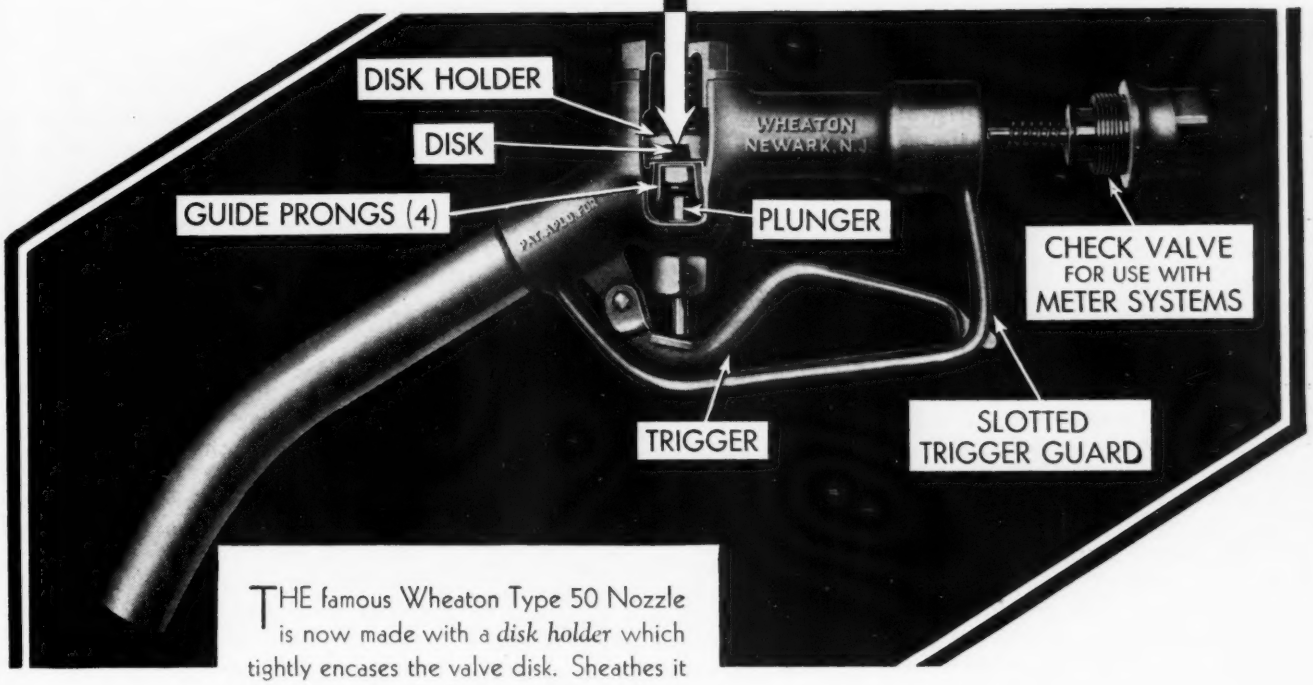
With regard to the common purchaser statute it was set up that the "act does not authorize any restriction in the production of oil but only attempts to prevent discrimination in the of market outlet."

[1]National Petroleum News, page 30, July 9, 1930, and page 40, July 16, 1930.

Crude Stocks Gain Again

NEW YORK, July 26—Following decreases of 1,269,000 barrels in May and 1,879,000 barrels in April in pipeline and tank farm gross domestic crude stocks east of the Rockies, stocks increased 625,230 barrels in June, according to the American Petroleum Institute.

THE DISK LASTS MANY TIMES LONGER



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1930 Gasoline Imports Double, Less Crude Shipped In

By Paul Wagner

N. P. N. STAFF WRITER

HOUSTON, July 25

IN the first five months of 1930, total imports were 42,922,000 barrels, compared with 45,897,000 barrels in a similar period of 1929.

Gasoline shipments into this country had nearly doubled, while crude shipments declined.

Shipments from the Dutch West Indies by the Royal Dutch-Shell group companies and the Pan American Petroleum & Transport Co. (Standard Oil Co. of Indiana)—at present approximating 30,000 barrels daily—were almost entirely responsible for the gasoline imports.

Crude imports of 25,363,000 barrels in the 1930 period compared with 37,261,000 barrels in 1929, the Standard Oil Co. of New Jersey and the Gulf Oil Corp., accounting for most of the movement both years.

As neither the Gulf nor Jersey refines oil abroad, the virtual doubling of gas, oil and fuel imports in 1930 credits mainly to the Shell and Pan American interests, operating plants at Curacao and Aruba, in the Dutch West Indies.

Gas and fuel imports for the 1930 period totalled 10,810,000 barrels, compared with 5,742,000 barrels the first five months of 1929. Imports of kerosene, lubricants and tops were in negligible quantities both years.

Crude oil produced in the United States the first five months of 1930 totalled 392,000,000 barrels, or a reduction of 9,000,000 barrels from 1929. The reductions was due entirely to prorating in virtually all flush producing areas of the country.

In Venezuela, whence comes the major portion of present foreign oil production, curtailment has been furthered since the first of the year. In February, total daily average production of all companies was 389,233 barrels, comparing with 388,328 barrels in May, 1929.

DEMANDS of the Independent Petroleum Association of Texas (producers) for the reduction of crude and refined oil imports into the United States, in proportion as domestic crude production is curtailed through voluntary proration, led the Houston office of National Petroleum News to make a survey of the 1930 supply of crude and other oils, as divided between domestic and imported oils. The figures are presented in the accompanying article.

Figures for May, 1930 show daily reductions approximating 35,000 barrels to 352,207 barrels, or nearly 10 per cent.

Royal Dutch-Shell interests, controlling three operating companies, lead in Venezuela production. Their combined production in May was 164,029 barrels daily, including 100,165 barrels from the Venezuela Oil Concessions, 50,964 barrels from Caribbean Petroleum Co., and 12,900 barrels from Colon Development Co. Total May production of the group compared with 199,863 barrels daily in February this year and 177,128 barrels in May last year.

Standard of Indiana, through stock control of Pan American Petroleum & Transport Co., and the subsidiary Lago Petroleum Corp., is the second largest Venezuela producing interest. Its May, 1930 daily production of 102,160 barrels compared with 102,108 barrels a year previously and 105,350 barrels in February, 1930.

The Pan American, the last 12 months, has become an aggressive marketer of products in Atlantic Seaboard and southeastern territory of the United States, supplying this trade with imported gasoline.

Gulf Oil Corp., which was producing 84,197 barrels of Venezuelan crude daily a year ago, through a South American subsidiary, had reduced its exploitation to 62,301 barrels daily in February, 1930, and to 62,538 barrels in May, 1930.

Standard Oil Co. of New Jersey, through operating control of the Creole Petroleum Co., was producing 18,794 barrels daily a year ago, 15,180 barrels in February, 1930, and 15,232 barrels in May, 1930.

Other production in Venezuela is confined to the British Controlled Oilfields, Ltd., which produced 5198 barrels daily a year ago, 5232 barrels in February, 1930, and 6795 barrels in May, 1930; also the General Asphalt Co., production of which has been less than 1500 barrels daily at all times.

It is maintained by a number of substantial units in the domestic petroleum industry, including importing companies, that the difficulty now confronting them is over-manufacture of gasoline rather than overproduction of crude.

For the first five months of 1930, United States gasoline supplies from refineries increased 12,348,000 barrels, of which 4,700,000 barrels was in Texas, representing 12½ per cent more than the 1929 figure. In May, Texas increased its gasoline output 1,150,000 bar-

rels over May, 1929, or 14.57 per cent.

As regards crude oil production, Texas was again the worst offender; taking from the ground 9,000,000 barrels more in the first five months of 1930 than in 1929. California produced 17,000,000 barrels less and Oklahoma 6,000,000 barrels less.

It is pointed out that at the end of the first two weeks of the present move to curtail gasoline production, approximately 130,000 barrels daily reduction had been made in refinery runs of the United States.

An additional 100,000 barrels daily reduction is considered necessary to attain a sufficient draft on gasoline stocks to avoid adding excessive storage, particularly in the last quarter of the year.

American Petroleum Institute figures as of July 12, 1930, showed domestic gasoline stocks totaling 47,792,000 barrels, compared with United States Bureau of Mines figures of 43,115,000 barrels, Jan. 1, 1930. Oct. 1, 1929 gasoline stocks were 33,222,000 barrels.

Analysts suggest that if the October, 1929, figures may be accepted as minimum working stocks when it is necessary to draw approximately 14,000,000 barrels from gasoline storage between now and Oct. 1, 1930, to bring down motor fuel quantities to desirable levels.

Increased stocks of gasoline in the various refinery districts of the United States were mainly in the Indiana-Illinois, Oklahoma-Kansas, California and East Coast regions, as shown by A. P. I. weekly figures at the end of June.

Stocks in the Indiana-Illinois district totalled 8,067,000 barrels, or 2,584,000 barrels more than at the beginning of January; Oklahoma-Kansas, 4,609,000 barrels, or 1,005,000 barrels more; East Coast, 8,163,000 barrels, or 2,165,000 barrels more; California, 15,250,000, or 7,059,000 barrels more; Mountain States, 2,704,000 barrels, or 431,000 barrels more; Appalachian district, 1,638,000 barrels, or 356,000 barrels more; Texas Gulf Coast, 5,606,000 barrels, or 27,000 barrels more; Louisiana Gulf Coast, 2,066,000 barrels, or 189,000 barrels more.

Sinclair Finds Gasoline Cost Exceeds Selling Prices

CLEVELAND, July 21

GASOLINE costs 16.87 cents a gallon to produce and market with crude oil costing an average of $1.29 cents a barrel at the well in the Mid-Continent.

This is the computation of the Sinclair Consolidated Oil Corp., and published in the *Sinclair Reflector* for July 16.

The average selling price in 50 representative cities in May was 20.5 cents with an average tax of 3.77 cents. This was a net back for the gasoline of 16.73 cents, and means an average loss on gasoline business of 0.14 cent a gallon.

The cost of the gasoline was broken down as follows:

	Cents
Cost of crude to refiner.	3.07
Gathering, transportation	2.40
Refining including cracking	2.40
Cost before shipment	7.87
Freight, average 100 miles	1.50
Bulk station, tank wagon costs	4.00
Dealers' margin	3.00
Storage, evaporation, incidentals	0.50
Cost of shipping, etc.	9.00
Total cost	16.87

The company has this to say of its computation and the selling price of motor fuels:

"The estimates here given are not the figures of any one man nor of any one institution. The known or exactly ascertainable figures have all been taken from such authorative sources as the U. S. Department of Commerce, the Automobile Chamber of Commerce, the American Petroleum Institute, etc.

"Absolute figures cannot, as to certain items, be obtained. Other estimators would doubtless vary in a small degree, but not sufficiently to disturb the broad conclusion.

"As a whole, manufacture and distribution of gasoline in the United States is not being paid a fair wage. Without such support the service cannot be maintained at its present state of efficiency.

"Here is another side of the picture. While the refiners and distributors are doing their gasoline business at a loss or with inadequate returns every state in the Union now has an assured and substantial net revenue from gasoline taxes. These revenues vary according to the rate of tax and the amount of gasoline used. Such taxes vary from 2 cents to 6 cents a gallon, and the total gasoline taxes collected in the United States in 1930 will amount to at least half a billion dollars. They amounted to $431,636,454 last year. This year some of the states have increased the rate and only one state made a decrease—a cent for the last half of the year. The New York state tax did not become effective until May, 1929.

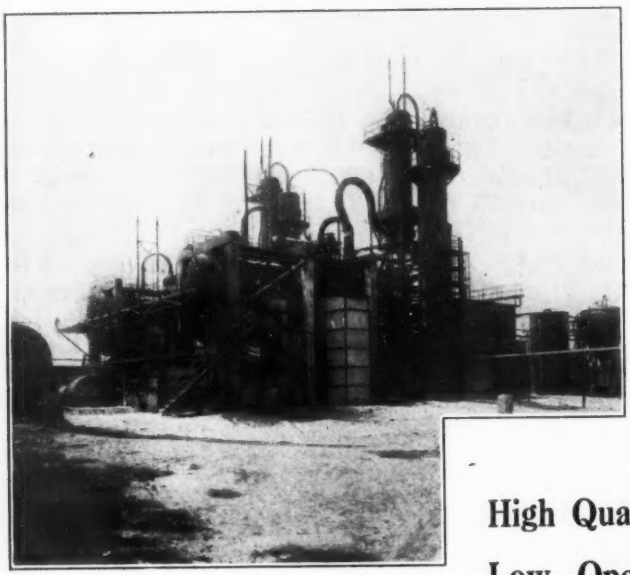
"In 1930, 18 states charge 3½ cents a gallon or less, while 30 states charge more than 3½ cents. The average of all is 3.77 cents. Some states also charge a small inspection fee, averaging .02 cents a gallon. This does not affect the general result.

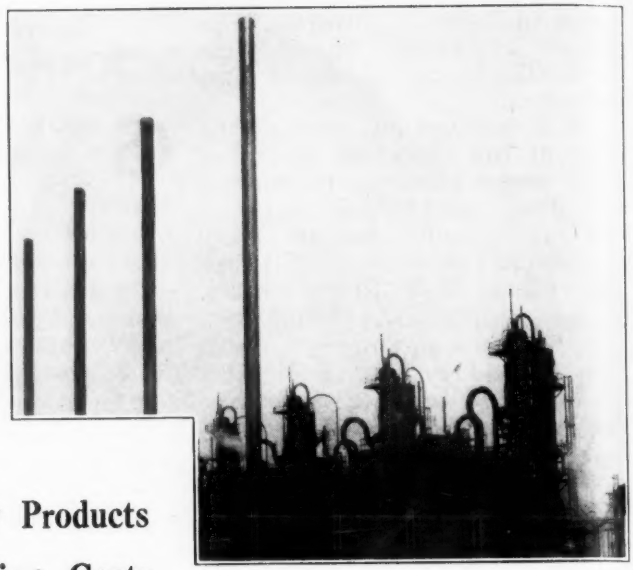
"No other country in the world has such a gasoline service or pays so little for it. Average retail prices in 1929 were, in round figures, in England, 30 cents a gallon; Mexico, 29 cents; Spain, 32 cents; Venezuela, 34 cents; Germany, 35 cents; Argentina, 38 cents; France, 39 cents; South Africa (Durban) 40 cents, and so on, upward to Bolivia, 65 cents.

"Capital in the oil business is entitled to a 'living wage.' Fair profits only are required. No more is necessary; no less is sufficient—

"A starved horse cannot haul a heavy load."

JENKINS CRACKING PROCESS





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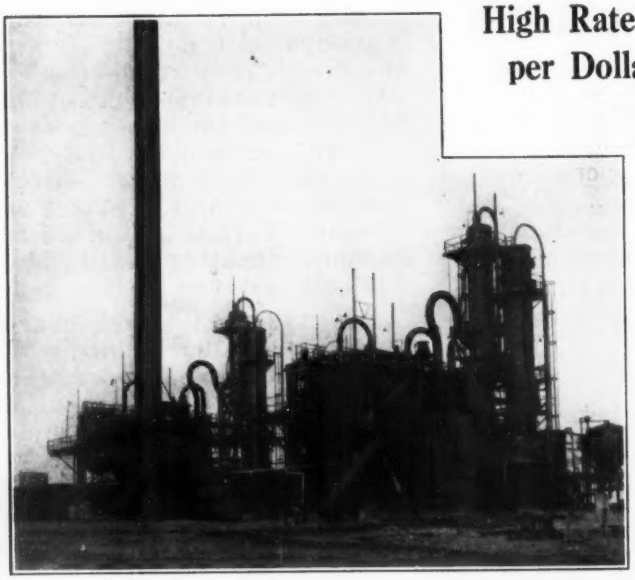

JENKINS CRACKING PROCESS

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NEW YORK FORT WORTH LOS ANGELES

HERE is a story going around the oil country. There are two men who operate as partners in producing oil, living in one of the smaller Texas oil towns. One went to Houston on business, taking with him two quarts of the stuff the president's crime commission has been trying so hard to locate. The one who remained at home was trying to put through a long distance call to the traveler.

"Operator," he said, "what report do you have on that call of mine?"

"D. A.," she replied (In telephonese, "Don't Answer.")

"I don't know what you mean," he said. "In oil country talk that means, 'Dry and Abandoned.' I know he can't be dry yet, for he had two quarts when he left, but he may be abandoned."

* * *

A. A. Bearl, one time manager of production for the Tidal Oil Co., is developing a new pool in southwestern Muskogee county, near Boynton. His associate is T. E. Elliott.

* * *

The oil shale business has been dormant for several years and, according to the report made by M. J. Gavin and J. S. Desmond, in Bureau of Mines Bulletin 315, it will remain so for quite a while. They assert that development of the oil shale resources is related to that period when substitutes for petroleum are in demand.

* * *

M. J. Kirwan, manager of the producing department of the Indian Territory Illuminating Oil Co., is vacationing in Minnesota.

* * *

Wallace Sawdon, who has devoted the last two years to trade journalism as the field editor for Oil Field Engineering, has resigned and gone to Los Angeles where he will make his home. Mr. Sawdon formerly was with the Bureau of Mines in Wyoming.

* * *

H. E. Crum, Amarillo district geologist for the Skelly Oil Co., attended company conference in Tulsa last week. Every now and then, when some of the old soldiers start talking about the Great war, Mr. Crum is persuaded to make a few remarks on his experiences. He was a member of the American expeditionary force that went to Archangel, on the White Sea, to battle the Bolsheviks. The number who took that Russian trip was relatively small, which makes his stories all the more informative.

* * *

T. B. Slick, noted independent producer, is in Johns Hopkins hospital, Baltimore, where he is undergoing medical treatment. Mr. Slick has had an unusually strenuous season, with a big drilling campaign in the Oklahoma City field. Doctors advised him to pay closer attention to his health.

* * *

Died: In Sante Fe, N. M., Park B. Lamberton, Tulsa oil producer. Injuries received in the war made it necessary three years ago for him to go to a sanatarium. His widow survives him; also his brother, John Lamberton, Tulsa oil man.

* * *

Now the gas industry is dragged into the prohibition situation. Meter readers for the Kansas City Gas Co. were called before the grand jury to tell what they knew about the manufacturing activities alleged to have been conducted in a garage. The district attorney gave out statements to the effect that the gas company was a party to the high crime, as it provided one ingredient to the enterprise. If it comes to this, oil companies are equally guilty. They provide the kerosene that is put into the modern tanglefoot, or old man's hooch.

* * *

Byron Dewey, chief electrician at the Ponca City refinery of the Continental Oil Co., has been transferred to the company's refinery at Baltimore.

* * *

Married: In Oklahoma City, Miss Isabelle Connolly and E. C. Noble, both of Tulsa. Mr. Noble is Mid-Continent manager of sales for the Weber Engine Co.

* * *

During the hot weather the Sunray Oil Co., Sheldon Oil Co. and W. R. Staples have put drilling crews on an eight-hour per day working basis.

* * *

The latest in scientific titles is called to our attention by C. B. Mapes, technologist for the Mid-Continent Oil & Gas Association. A chiropractor in Sulphur, Okla., advertises that he is a "Spinal Engineer."

* * *

Died: In Tulsa, C. A. Easton, 42 years old. Death was caused by the accidental discharge of a shotgun which Mr. Easton was cleaning. He was one time with the Producers & Refiners Corp. and later was vice-president of the Kistler Petroleum Co. He returned recently to Tulsa from Albuquerque. His widow survives him.

* * *

E. C. Felt, of the Dale W. Moore agency, Tulsa, is in Franklin, Pa., recovering from complications which followed a throat operation. It is expected that he will be away a month longer.

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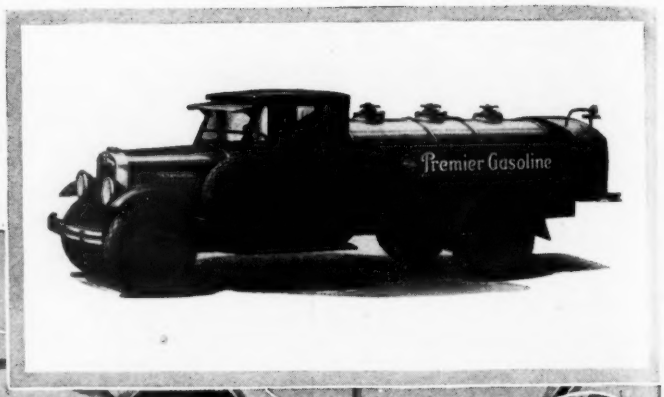

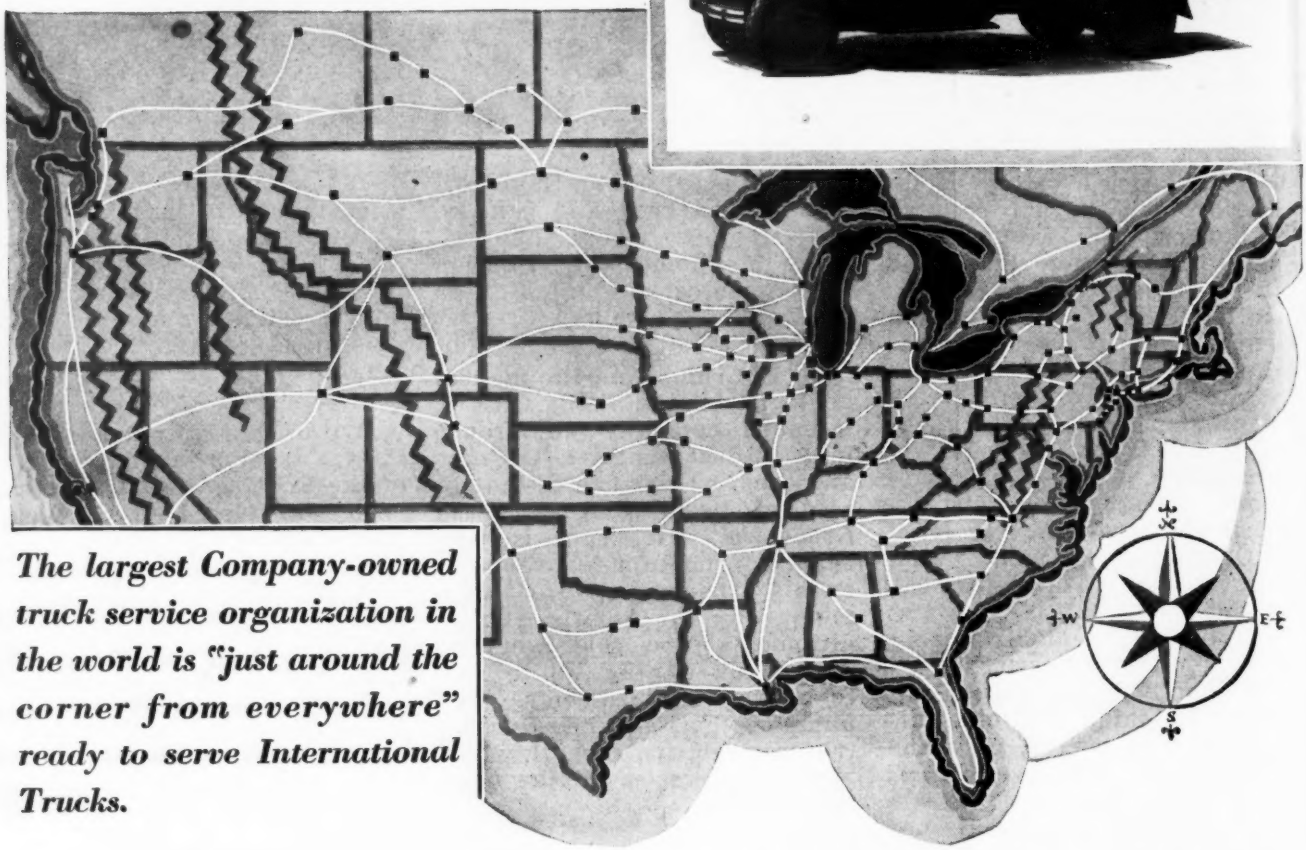

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Wildcats Hold Major Interest In Mid-Continent

TULSA, July 26

WILDCATS were unusually interesting in the Mid-Continent. Several were rather spectacular and indicate possibilities in new areas.

In Oklahoma, Payne, Kay and Hughes counties lead in the outside reports, while the major pools were busy with extensions.

Kansas had more than the usual number of favorable wildcats and much of the gloom of the previous week was dispelled, particularly in the Eastborough area, near Wichita. The outstanding well in the Texas Panhandle was a wildcat in Moore county.

Oklahoma City Pool

Most of the interest in the Oklahoma City area still centers in the wildcats to the north. The Prairie-Slick No. 1 Dills, SE NW, 17-13-3W, had a slight increase in oil at 6740 feet and is now estimated at 15 barrels, 50 per cent water. It is 10 miles north of the nearest production and thought to be on an independent structure. Another 100 feet should tell the story, for the well is nearing the Wilcox.

Three and one-half miles southeast of this well, the Magnolia No. 1 Johnson, 35-13-3W, cored the Wilcox from 7134 to 7142 without a show. It has been logging low all the way and now looks as if all it would produce is geologic information. Further north, the Mid-Kansas No. 1 Messer, 32-14-3W, has similar indications. It topped the Oswego at 6075, over 1000 feet lower than in the field.

Proration has slowed down the whole pool. A well founded skepticism concerning the ultimate return in the area is another brake. But five new locations were made the past seven days. Within the city limits, the new drilling restrictions are making it so tough on the promoters that caution will mark all their future activities.

Of the completions in the pool, the Phillips Petroleum Co., No. 1 Compress, 36-12-2W, is the most interesting. It marks the extreme northeast edge of present production. At a total depth of 6390 it was brought in with difficulty because of a break in the connections. Its estimated initial is in excess of 25,000 barrels with 80,000,000 cubic feet of gas.

West Chandler, Lincoln Co., Okla.

The West Chandler pool has another spectacular producer in the Coline Oil Co., No. 1 Telford, NW NW SE, 7-14-4E. When 10 feet in the Simpson at 5041, the well flowed 2268 barrels in 10 hours through 9-inch casing. It is to be deepened. The Prairie was not so fortunate in its No. 2 Morton, NW SW NE, of the same section. The Simpson carried only water at a total depth of 5086. The well is to be plugged back to the Viola, topped at 4960, where a 900-barrel show was found. The Magnolia No. 2 Myers, NE, 7-14-4, had even worse luck—a hole full of water in both the Wilcox and the Siliceous lime and is to be plugged to the top.

Payne County, Okla.

In Payne county in north central portion of the state, two failures were registered. Most drilling is done on the community plan and the Reiter-Foster Oil Corp., has had most of the luck. Two of their wells, drilled in conjunction with the Prairie and others, have had initials above 1000 barrels.

The producing horizon is the Misner sand. This sand had nothing but water in the Minnehoma Oil & Gas Co., No. 1 Shadel, NE SE NE, 7-19-1W, one mile west of the above producers. It was logged from 4949 to 4954. The Tidal-Gardner et al No. 1 Edwards, SE SE, 13-19-1W, had an oil show in the Viola but found the Wilcox a water bearing formation at 5055.

Kay & Hughes Counties, Okla.

In central Kay county, about 12 miles south of the Kansas line, a wildcat indicates another likely producing spot. It is the Blankenship et al No. 1 Hansen, SW NW SW, 17-27N-2E. In the Bartlesville sand from 3586 to 3592, the well was reported spraying 50 barrels with 8,000,000 feet of gas. Further drilling and a shot may bring an increase.

Hughes county had two surprises. The first of these was the Magnolia No. 1 Dale, NW SW SW, 16-7-8E. Its initial production of 332 barrels seems to point to a new Gilcrease sand pool. The well is bottomed at 3176. All other wells in the neighborhood are gas wells.

The No. 1 Brown of the same company, SW NE NE, 17-7-8, over did the gas and blew wild with 100,000,000 cubic feet. The pay was in the Gilcrease series, from 2911 to 2913. The volume was so unexpectedly large, however, that it found the operators unprepared and the well went wild for 72 hours. Located two miles south of the old Wewoka pool, the well has caused several new locations to be made.

Kansas Wildcats

The most interesting wildcat of the state was in Rice county, the Tatlock et al No. 1 Plogg C, SW SE, 33-18-9W, nine miles north of the Schurr pool. The well topped the conglomerate at 3245 and found the pay from 3260 to 3271.

It has not yet been determined whether production is coming from the Siliceous pay of the pool or is entirely in the Chat pay. On the last report there was 1600 feet of oil in the hole and the well was making five bailers of oil per hour. It is quite possible the well is on the same arch as the Schurr pool in 21-20-10W, and there

may be a direct connection between them.

The Schurr pool itself is in a bad way as far as markets are concerned. The Independent Oil & Gas Co. has withdrawn the only outlet. Though this was only 50 barrels per day from each of the four producing wells, it was better than the complete shut-down which resulted. Several drilling wells have been shut down for better times.

The Voshell pool of McPherson county was extended one-half mile north by the Slick-Pryor & Lockhart No. 2 Gratton, SW SW NW, 34-30-3W. This well had a 100-barrel show in the Viola from 3393 to 3443 and a big increase in the Wilcox from 3447 to 3450. No gauge is yet available.

Eastborough Pool, Sedgewick Co.

After the apparent failures of the previous week, the Eastborough pool, on the edge of the city of Wichita, assumed a new importance in the last few days. The Wilcox sand was found to be productive. In the Vickers Oil Co., No. 1 Keys, NE NW NE, 30-27-2E, this formation was drilled from 3238 to 3242 and the hole filled rapidly with oil. A flow of about five barrels an hour afterward developed. The well is one-half mile south of Chat producers that started all the excitement some weeks ago.

Offsetting the discovery well in this area, the Derby Oil Co., No. 1 Eastborough, was reported last week as a comparative failure. It has since been deepened slightly and is swabbing around 1200 daily. The pay is in the Chat from 2949 to 2959. Both new wells have resulted in the staking of a number of new locations and the residential district of the city is threatened with oil baths in the not distant future.

Texas Panhandle

The most important wildcat in the Texas Panhandle was the Shamrock Oil & Gas Co., No. 1 Shary, 187-3T-T&NO, Moore county. The pay was found below sea level from 3495 to 3505 and the well is reported spraying 100 barrels per day. A water show encountered at 3472 has been exhausted. This is the second producer in the northeast quarter of the county and gives further evidence of the long suspected pool.

New Pump Station and Field Laboratory to Be Shown

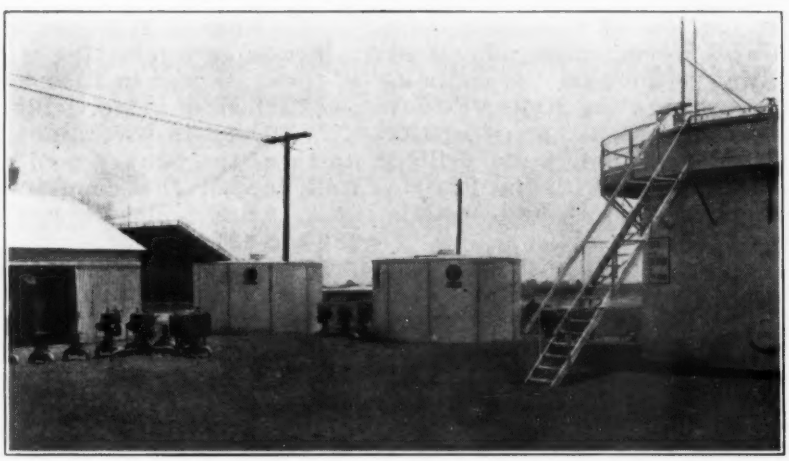
TULSA, July 25

PETROLEUM divisions of the American Society of Mechanical Engineers, and the U. S. Bureau of Mines are perfecting two innovations for the oil industry for showing Oct. 4-11, at the International Petroleum Exposition, according to N. A. C. Smith, superintendent of the Bureau's Bartlesville station, and W. G. Heltzel, chairman of the society's division.

The bureau's contribution, Smith said, is a control laboratory for operating leases, where unexpected situations which arise in oil fields may be solved without the delay required in calling for an analysis from the headquarters' laboratory.

The A. S. M. E. has just completed its perfected automatic pump station on the oil show ground at a cost of nearly $80,000. It is an improvement over the station shown last year.

The expansion program of the oil show will receive the finishing touches in August. The visitor who wishes to see everything at the Exposition will now have to walk five miles over cement walks and board floors, but what he finds displayed will be the "latest" in the industry, General Manager W. B. Way says.



Partial view of automatic pump station to be shown at the International Petroleum Exposition under auspices of the American Society of Mechanical Engineers

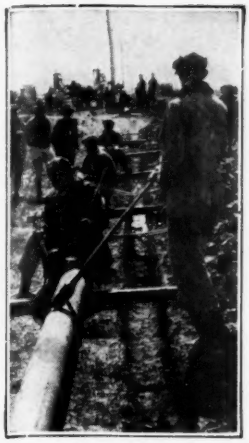
Bubble Tower in Poland Copied From N.P.N.

CLEVELAND, July 24.—A bubble tower in a Polish refinery designed after an article published in NATIONAL PETROLEUM NEWS was seen by Dr. Gustav Egloff, Universal Oil Products Co., in his current trip to Europe.

"The bubble tower was working very nicely with side reboilers and good gaps between fractions," he wrote in a postcard to Warren C. Platt, editor of NATIONAL PETROLEUM NEWS, from Constantinople.

Dr. Egloff has been studying refineries in Poland and Roumania, and saw the gas well on fire in Moreni. On July 4 he was in Roumania and addressed the Institute of Petroleum Technologists.

Dr. Egloff finds the airplane a time saver. He flew from Bucharest to Constantinople in three hours against 36 hours by train. He will fly to Prague in eight hours compared with 60 hours by train.



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Playa del Rey Tideland Drilling Held Up by Injunction

By Jack N. Westsmith

N. P. N. STAFF WRITER

LOS ANGELES, July 25 EXCEPT for the new activity at Playa del Rey, Elwood, Potrero, and on flank leases of Long Beach, California production news consisted principally of routine completions. Some interest centered on developments in the Terra Bella field, Tulare county.

Of 22 notices to drill during the week, seven were for wells in Long Beach, 5 at Playa del Rey, and 2 at Huntington Beach. The remaining 7 were scattered throughout the state in proven and semi-proven areas.

Total new wells started in California this year is 467, compared with 771 at the same time last year.

Leaders in the California proration movement estimate prorated production from Playa del Rey will exceed 25,000 barrels by Sept. 1. This is anticipated to result from unrestrained town lot drilling south to north across the field's long axis. It is further predicted daily production will approximate 30,000 barrels by Sept. 15, under a curtailment program at least 75 per cent effective.

Injunction suits and counter suits have combined to prevent definite action on the question of tideland drilling offshore from del Rey. Owners of beach property were successful in keeping the drill out of the tidelands by obtaining restraining orders that were at first denied and later affirmed.

Geologists consider completions in the narrow townlot area have a chance of relatively sustained output if the ocean is not exploited immediately. This claim is based on a theory that the structure plunging into the ocean affords a drainage area for the nearest mainland wells. With the ocean to the west, the townlot play is bordered on the east by large comparatively undrilled tracts held by Union and Ohio Oil companies. This in itself is considered more favorable to longer life for closely spaced wells than was anticipated.

Superior Oil Co.'s No. 1, in the townlot area, at Playa del Rey, picked up the nobular shale approximately 500 feet higher than previous completions in the same locality, and had an initial of 2000 barrels, 24 gravity oil, first 24 hours. The project is bottomed at 5640 feet, is the pool's 13th completion and raised the potential about 12,500 barrels.

Crude production from the field is being handled in a haphazard manner, with a consequent impairment of price. Ohio Oil Co.'s output is going to Standard Oil Co. of California at its El Segundo refinery; but a number of independent producers are forced to truck their daily yield to the few Los Angeles Basin refineries willing and able to handle the sulfurous oil.

Oil is being gathered from three producing companies by the Del Rey Oil and Refining Co.'s pipe line. It is reported this organization will handle production from numerous other small producers delivering it temporarily, at least, to one of the major refineries. The same company is constructing a 10 million cubic-foot capacity absorption plant in the south end of the Venice field, to care for anticipated natural gas production.

In the tidelands offshore from Elwood, Pacific Western Oil Co. put its No. 92-5 on production for an estimated output of 4000 barrels the first 24 hours. Located on a pier over 1100 feet from shore, it was bottomed in the productive Vaquerous at 3474 feet. The oil was 37 gravity and there was over 5 million cubic feet of gas per day with the oil.

This is the company's fifth producer in Elwood and raises its potential to over 22,000 barrels. Preparations are under way to drill two more wells beyond 92-5, to exploit the ocean lease that extends 4000 feet from the beach.

Field reports indicated a daily yield of only 2300 barrels, although new completions are allowed a five-day open flow period. Company engineers stated the well was beaned in to comply with proration measures and because of the comparatively high gas pressure that, in some instances, has caused Elwood wells to sand up when wide open.

On a nearby permit, 91-2, Seaward Oil Co. was swabbing with the hole bottomed at 3655 feet. There appears to be some question as to whether it will make good, as it is located on what is thought to be the eastern flank and is reported to have found the Vaquerous considerably lower than other completions.

To drill or not to drill is the question facing Continental in regards its Kettleman Hills holdings. Although Secretary of the Interior Wilbur recently granted permission to drill three offset wells on government Permit land a qualifying clause preventing completion of the projects prior to July 1931, or until conditions warrant it, has "put the company over the barrel."

It is reported the company will drill at least one well on the section in question, 2, 22-17, which offsets section 35, 21-17

of fee land, which contains two producers and one well drilling in the oil sand. Continental made a location for Elliott 2-16 prior to the government's holding up of drilling permits pending agreement of a conservation program.

The rig is up for this well, which offsets Standard Oil Co.'s 38 on section 35. A location has also been made for an offset to Petroleum Securities Felix 1. However, if Continental does start drilling it appears logical that the Elliott 2-16 will get the call. It is higher on the structure than offsets to the Felix 1. However, if Continen- Whepley 1, to the east also on section 35.

Shell Oil Co. is drilling below 3500 feet in its Dixon well, offsetting the Whepley. Pacific Western Oil Co. has started operations on a road for a well on 1, 22-17, which will be drilled to prevent drainage by Shell's well. This area immediately surrounding the development on section 35 is the hot spot in Kettleman Hills, threatening to increase drilling activity prior to July 31, 1931.

Discovery of a shallow oil sand in the Terra Bella field, Tulare county caused considerable excitement in the eastern San Joaquin Valley play. The Terra Bella Oil Co. completed its Gardner 1 for 20 to 30 barrels of 14 gravity oil from 906 feet. Because of its low gasoline content the crude is reported to be good lubricating stock.

Western Drilling & Exploration Co. to the south of the discovery, picked up oil sand at 891 feet after passing through blue shale. Located on section 35, 22-27 this project was reaming below 911 feet. Approximately 12 locations have been made for additional tests of the area.

It was reported Richfield Oil Co. would drill a test well in the Devils Den district of the San Joaquin Valley. The test will be made on section 14, 25-18, part of 3000 acres leased by Richfield the past two years. Previous work by other companies in the area failed to indicate commercial production, but as these tests were made with cable tools without coring, little is known of subsurface conditions.

On the Western Front

By Jack N. Westsmith
Los Angeles

W. N. Craddock, chief petroleum engineer, Pacific Western Oil Co., plans a vacation in the mountains of northern California. He will be accompanied by Mrs. Craddock.

* * *

Alfred M a r s t e n recently moved his family from San Francisco to Venice, Cal., so they could be with him while he supervises developments of his company in the Playa del Rey field. He is president of the Mohawk Oil Co.

* * *

Rumors that North American Oil Consolidated had been approached by Cities Service interests with offers to buy, were denied by company officials.

North American owns 6400 acres in fee and 2600 acres of leased lands, all in Kern county. In addition to its crude production of about 750 barrels daily, the company has two absorption plants with combined capacity of 22,000,000 cubic feet. The natural gasoline yield is in excess of one gallon per 1000 feet of gas.

* * *

Washington oil and gas operators recently held a meeting at Seattle to discuss ways and means of establishing more equitable statutes affecting development of the state's petroleum resources.

* * *

Richfield Oil Co. recently made the following changes in personnel of its production department: James Charlton, Jr. was promoted from general superintendent, southern division, to superintendent, in charge of all drilling and production. H. F. Boggs becomes superintendent of development and production for the company's activities in the south.

Formerly sub-surface engineer, Los Angeles office, Stender Sweeney, is now divisional engineer in charge of petroleum and geological engineering, southern division, with headquarters at Long Beach. I. W. Butterfield was made divisional geologist and engineer in the San Joaquin Valley division. His duties will include directing exploration work.

R. M. Harris, formerly assistant resident engineer, Long Beach, is now in charge of petroleum engineering for the coast division, comprising fields of Ventura and Santa Barbara counties.

* * *

Cliff B. Limbocker, sales manager, Hancock Oil Co., decided vacationing alone was out of the picture. He recently announced his coming marriage with Miss Emelyn Bickett, Omaha, Neb. Secrecy shrouds honeymoon plans for the couple, but it is reported an extended trip into the Pacific northwest will be included.

* * *

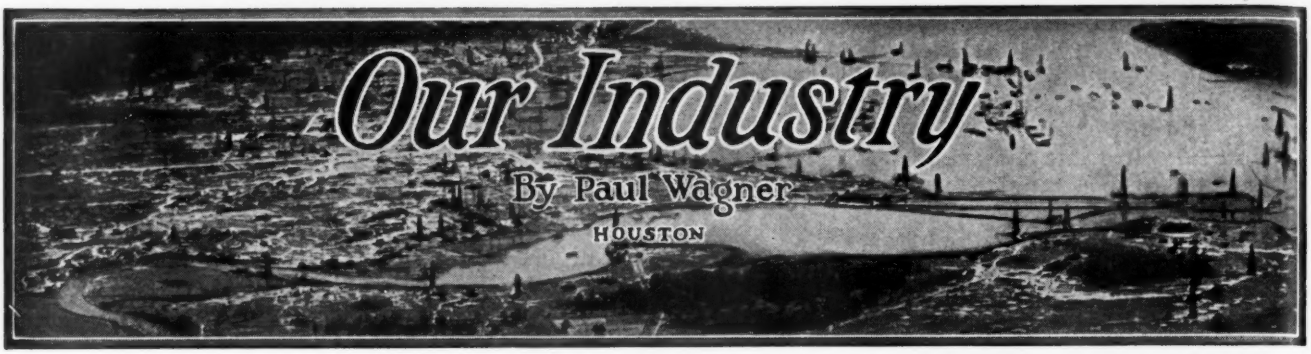
Recent changes in personnel of The Texas Co. (California) included the promotion of Dr. Ralph B. Reed to chief geologist and of James T. Wood to assistant chief geologist. Dr. Reed is vice president of the A. A. P. G. and is considered one of the best authorities on geology and its ramifications.

* * *

Accompanied by his wife, Dr. Roy R. Morse, geologist for Shell Oil Co. of California left recently for a two months trip to Europe. Dr. Morse will be at the headquarters of the Royal Dutch Shell in London before proceeding to the Hague office. After a short vacation in other European points they will return to California.

* * *

K. R. Clarke, formerly with the New York News Bureau has been appointed director of public relations of the Rio Grande Oil Co. Prior to his connection with the financial news ticker service, Mr. Clarke was chief statistician for Banks, Huntley & Co.



JAMES R. GAHAN, in charge of Tidal Oil Co. of Texas affairs at Forth Worth, now carries the title of vice president and general manager. He succeeds to the full authority held by James H. Jenkins before his transfer from Fort Worth, a year and a half ago, to become production vice president of the Associated Oil Co. of San Francisco.

A native of Bradford, Pa., born in 1887, Mr. Gahan spent his early years in Titusville. He was graduated from Allegheny college, Meadville. After practicing law in Titusville and later serving in the World war, Mr. Gahan joined the Tide Water Oil Co., in 1920, serving as Tampico attorney of its Mexican subsidiary until May, 1922, when he became general manager of the Tide-Mex interests.

Mr. Gahan served in Mexico with Mr. Jenkins and joined him in the Fort Worth organization of the Tidal in 1923, heading its legal work until 1927 when he took charge of the land department.

* * *

Reports from Shanghai tell of the rapid recovery of C. S. Atwell, supervisor of construction for The Texas Co., in the Far East. He recently underwent an operation for appendicitis.

* * *

J. L. Cummins, who recently resigned as Texas Panhandle division superintendent of the Cities Service Gas Co., is now with the Missouri-Kansas Pipe Line Co.

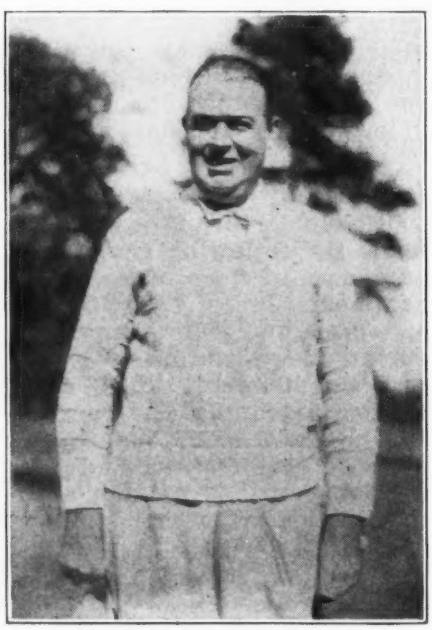
* * *

R. L. Grigsby, El Dorado district manager of the Pure Oil Co., holds medalist honors in the South Arkansas open tournament. Mr. Grigsby made a "hole-in-one" in addition to the low medal score of 77 in the El Dorado Golf and Country Club play.

* * *

Consolidation of various southwestern gas interests under control of Electric Bond & Share Corp., as a holding company, has been followed by removal of N. C. McGowan and other officers of the Louisiana Gas & Fuel Co., from Shreveport to Houston.

Mr. McGowan has been president of the Louisiana Gas & Fuel Co., which is affiliated with Electric Power & Light Co., and the parent Electric Bond & Share Corp. Embraced in the consolidation, as previously reported, were the Moody-Seagraves gas interests, the Magnolia Gas Co., and the Louisiana Gas & Fuel Co., among other smaller organizations. John S. Ivey has taken charge of the geological department.



James R. Gahan

Hal J. Basham of The Texas Pipe Line Co. has been made assistant superintendent of the Wichita Falls district.

* * *

R. E. Heithecker of the United States Bureau of Mines has been transferred from Carlsbad, N. M., to Shreveport, succeeding J. S. Ross, who recently resigned. The Shreveport Bureau office is a part of the lands and leasing division.

* * *

John Floyd, who has been scouting the Jackson, Miss., area for the Pure Oil Co., has been transferred back to Tulsa territory.

* * *

Ben Wells, machinist in the Fort Worth Gas Co. shops, is responsible for a pipe cleaning tool made from a piece of angle iron, which has been found economical.

The cleaner is described as being made of angle iron, ⅛ by 1-inch by 1-inch. A section 15 inches long is heated and mashed together to bring the two sides into position allowing a 15-inch power hack saw blade to slip snugly into the recess. The iron is rounded at each end with a hammer and a ½-inch by 6-inch nipple with cap on one end is driven over the ends. Rivets may be used to secure this to the frame. A 3/16-inch hole is drilled into the center of the frame, where the hack-saw blade rests, and is tapped out with ¼-inch standard tap, allowing ¼-inch set screw or bolt to be screwed in for the purpose of holding the blade in position during operation.

The side of the blade having teeth is used for scraping rust from pipe; the other side, sharpened to an edge, is used in the finishing process.

Laying Out Lines and Tankage On Production Lease

By Lawrence E. Smith
N. P. N. STAFF WRITER

TULSA

IN a preceding article (June 25, 1930) discussion was given on hook-ups and connections on flush producing properties, including those operated by gas lift. In this brief mention was made of water and gas lines for lease operation. Additional plans are herewith given.

Layouts shown here are in use on properties of one of the larger operators in the Mid-Continent field. The practice differs from that frequently used in that the loop system is not laid at the edge of the lease. The superintendent who designed the method of running his loop line so that it will be midway between two rows of wells all the way around, asserts that it gives better service to the locations and provides for economy in the use of pipe.

Fig. 1 illustrates the method employed for water system. By eliminating the tankage shown, the same system may be read to be the gas system, same sizes of pipe being use as for the water system. The locations are standard, 660 feet from well to well.

The six-inch pipe is connected so as to use either gravity or pressure feed to the loop water system. Two wood tanks of 1,600-barrel capacity each are set for reserve, one to be salvaged after development has been finished.

All feeder taps on loop lines are made at the point nearest the discharge of the six-inch line into the loop line and connections are put in so as to allow for the laying of additional two-inch temporary lines to a location when cementing. Storage tanks are located at the highest point on the lease.

This system is designed to deliver 2,000 barrels of water daily to four drilling wells at the farthest possible points from the entrance of the water to the loop line and two or three at closer points. A pressure of at least 60 pounds is desirable at the entrance to the loop.

The system is designed to be left in place after the development period has passed, as the salvage of four-inch and replacement with a smaller size, such as two-inch, will not be economical.

Taking Fig. 1 as the layout for a gas system for a new lease, the company that uses it has found it of advantage in saving pipe, as it has with the water system. The entrance point for the gas is somewhere along the left side in this plan, otherwise the feeders to the interior locations must be changed. The system will deliver 600,000 feet per day to four locations farthest removed from the point of entry to the loop. Gas is delivered to the boilers at a pressure of 50 pounds with input pressure of 60.5 pounds at any point.

The same layout is said to be the most economical possible

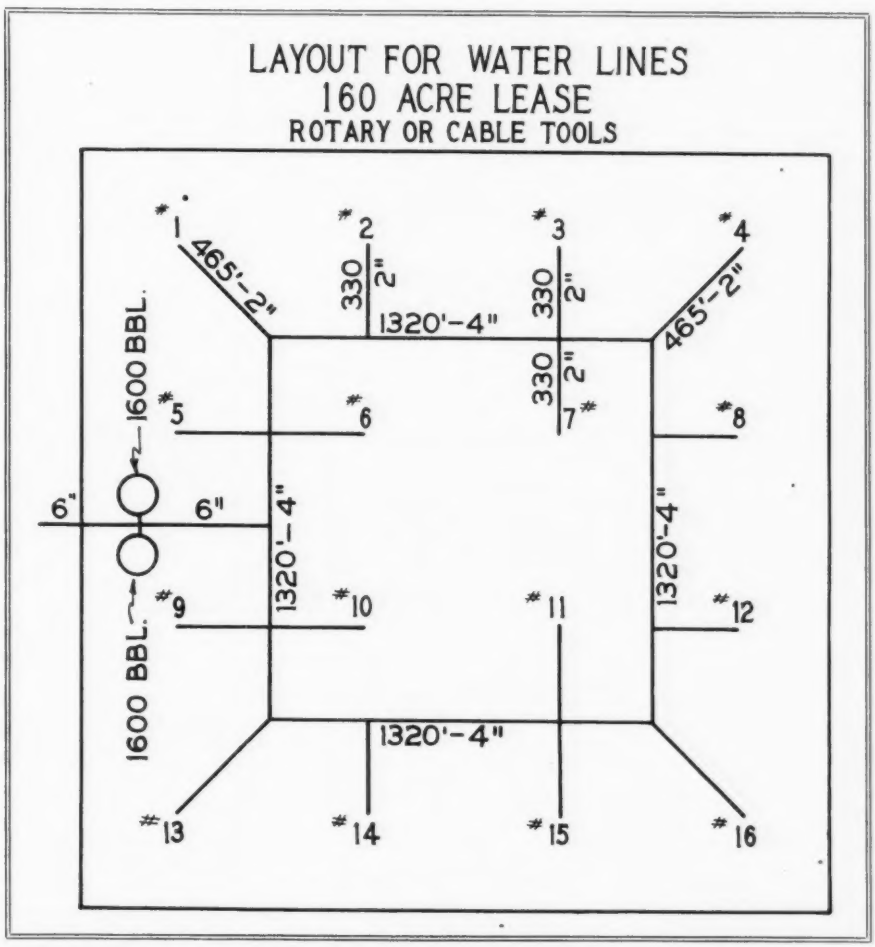


Fig. 1—Plan of locating water or gas supply systems for 160-acre lease in development stage

for the gas gathering system, except that sizes of lines are changed to suit the gas output of the wells.

In Fig. 2 is illustrated the same company's plan for water system on an 80-acre lease. The four-inch is again connected so as to use either gravity or pressure feed to the locations.

By laying four-inch the full distance and two-inch to locations No. 1 and 2, as shown by dotted line, instead of the Y shaped connections with two-inch as illustrated by straight lines, there will be required 330 feet of four-inch and 660 feet of two-inch as compared with 930 feet of two-inch.

The pressure drop will be 14 pounds as compared with 20 pounds when delivering 2,000 barrels of water to each location.

The dotted line plan is the one preferred by this company. It will deliver 2,000 barrels of water per day to four drilling wells with a pressure of 30 pounds at point A. This layout is sufficiently economical to be left in after development.

The same plan is used for the gas distributing system to the wells and for the gas gathering system, substituting different sizes of pipe according to volume of wells.

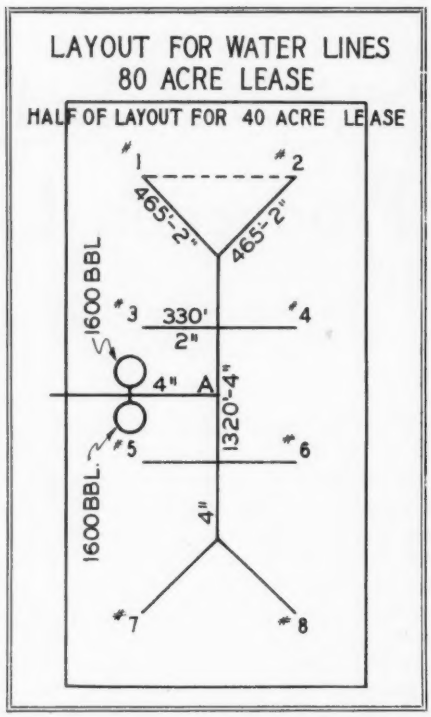


Fig. 2—Water or gas line system for development of 80-acre lease

In the previous article it was stated that much attention is being paid on leases to the eliminating of all right-angle turns in flow lines. In Fig. 3 is shown the design for header for flow tanks which was worked out originally by C. M. Copeland, district superintendent for the Comar Oil Co., when he was operating in the Smackover field. In this all right angle turns are missing. The manifold is made with welded inlets on each side and the test manifold is mounted immediately above the pumping header. A flume is set in the flow tank to assist in treating oil. Test tank is elevated so that oil moves by gravity into the stock tanks.

A steam line is connected into the test manifold so that any lead line can be steamed out. Tanks are set in pairs so they can be dismantled and the standard hook-up still retained to the last pair. A salt water drain inside prevents freezing and assists in preventing the deposition of salt by keeping the temperature even.

With right angle turns eliminated, friction is reduced and emulsification is kept at a minimum. Few connections are required. Besides the two welded manifolds, one for the flow tank and one for the test tank, there are only three unions, two gates, one Y branch and one 45 degree all for each well connected to the battery. Inlets to the manifold are so spaced that the fluid stream strikes the pipe wall and not another inlet.

In the first article on the subject of hook-ups, principal attention was given to wells in their flush stages. With the settling of production come changes. Engineers generally stress the importance of hooking up each well separately so that gauges can be taken.

One engineer suggests the arrangement shown in Fig. 4, after the master gate has been salvaged, the high pressure control has been replaced with low pressure casinghead. No fittings or swings are used in this plan.

He replaces separators at the wells after their settled period of production has been reached and they are on the pump. In their place he uses welded flow tanks of capacity to fit the well.

"All water gravitational lines may usually be replaced with two-inch and the eventual abandonment of water storage will be followed by two-inch lateral pressure line installations from a three-inch main line," says one engineer. "Oc-

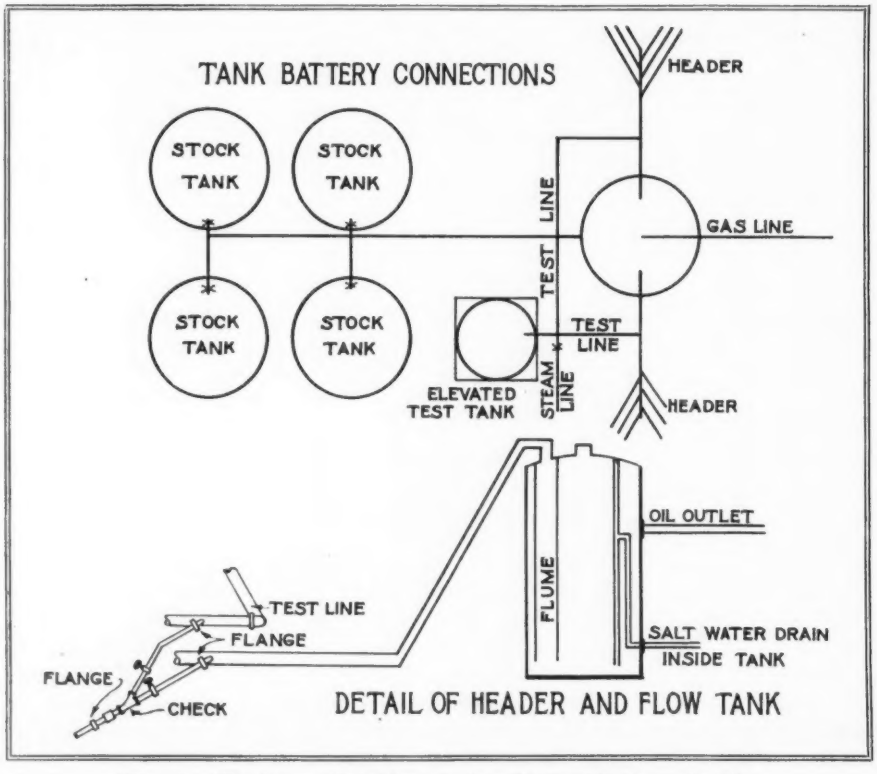
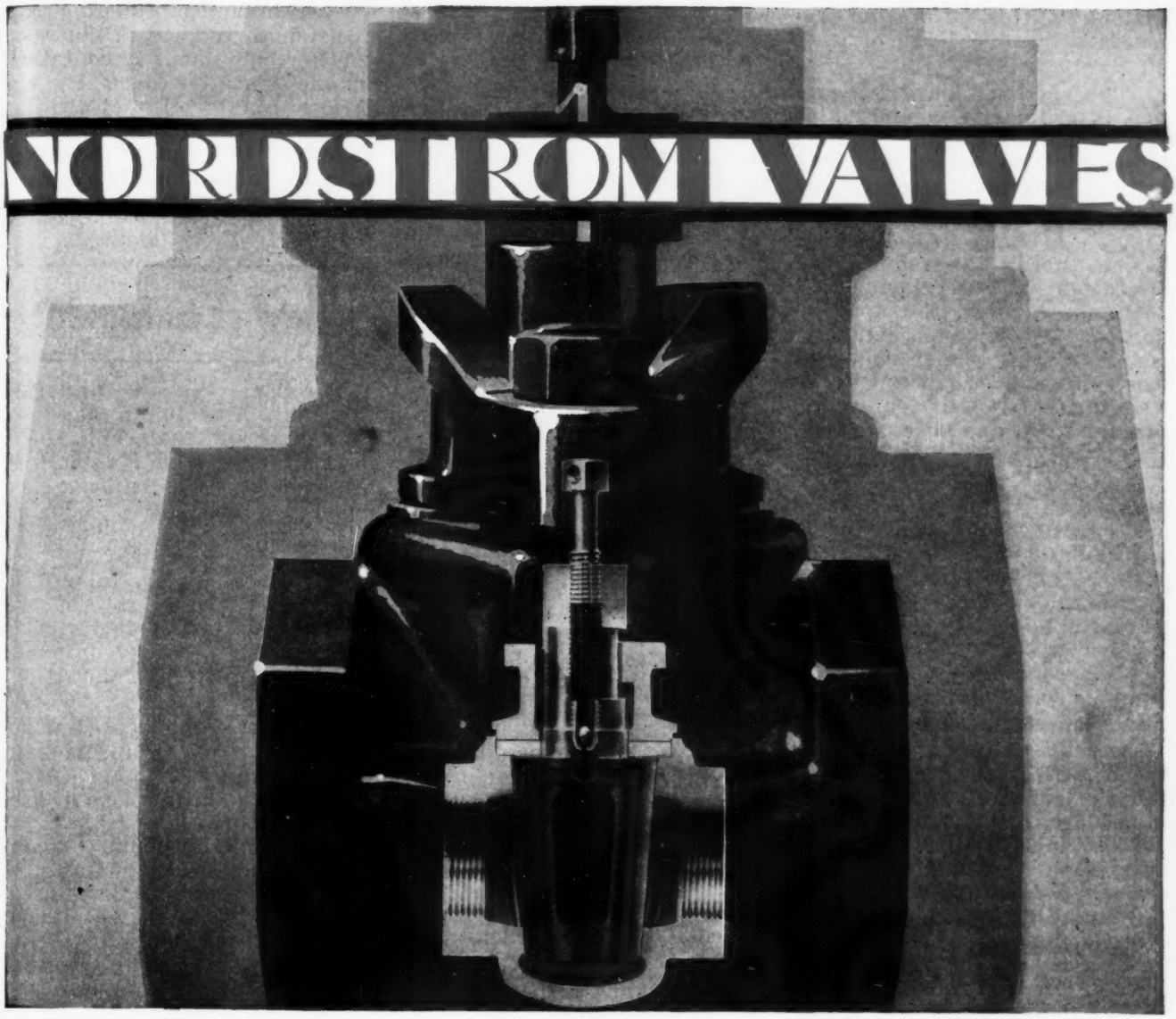


Fig. 3—Header and tankage plan for settled production



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Chicago - 176 W. Adams St.
Dallas - Magnolia Bldg.
Detroit - 2842 West Grand Blvd.
El Paso - 111 So. Virginia St.
Houston - Petroleum Bldg.
Los Angeles - 556 So. San Pedro St.
New Orleans - Masonic Temple Bldg.
New York - 11 W. 42nd St.
Pittsburgh - Clark Bldg.
St. Louis - 317 N. Eleventh St.
San Francisco - 343 Sansome St.

Agencies:

Denver - Republic Supply Company, 332 Continental Oil Bldg.
Honolulu - W. A. Ramsay Co., Ltd., Fort & Queen Streets
Manila - E. W. Sharp,c-o J. A.Murphy Co. Perez Semanillo Bldg.
Tulsa - B.V. Emery & Company, 216 E. Brady Street
Philadelphia - Brown, Wilson & Company, 1600 Arch St.
Saginaw - Arthur C. Beckert, 112 Durand Street
Salt Lake City - National Equipment Co., 101 West 2nd South St.

Factories in U. S. Oakland, Calif. and Belleville, N. J.
Canada - Peacock Bros., Ltd., Montreal, Toronto, Winnipeg, Vancouver. (Also Sydney, N.S.)
England - Audley Engineering Co., Ltd., Newport, Shropshire.
Buenos Aires, Argentine, - General Electric, Soc. Anon., Victoria 618 Esq. Peru.

casionally this alteration releases a large footage of used pipe.

"The smallest lease gas system is ordinarily composed of three-inch main and two-inch laterals. This change may also release varying amounts of pipe.

". . . a change from casing flow to tubing flow requires an alteration of well head connections; further, the application of intermittent injection of gas to a well, which has run two strings of tubing with a standing valve also requires a change in connections at the well head.

Obviously the fittings and connections employed in placing a well on the beam pump are simplified in comparison with the gas lift method. A T in the tubing from which the oil line is laid to a central trap, a valve, a stuffing box and an oil saver comprise the connections above the casinghead.

"The number of tanks in a stock tank battery may be reduced with the advent of declined production until only one 500-barrel tank remains; it is doubtful if the labor charge on tearing this tank down and rebuilding a smaller one would justify the additional investment unless the larger tank was needed elsewhere. Smaller fittings and pipe could replace larger equipment if the larger material could be utilized in other locations and the added investment was already established in stocks.

"Oil flow lines may be ultimately reduced in size to two-inch. Some wells on the beam produce into well separators with reduced pipe sizes and in the event of a smaller separator installation, the gas relief line may also be constructed of rally some lines will be removed with the gradual approach of oil exhaustion.
oil exhaustion.

"An individual well separator should be utilized as long as a well is produced under gas lift method and possibly some advantage may be established in the cases of a few pumping wells; but generally beam pumping wells flow into a centrally located separator, common to a group of wells, the gas being taken from this one separator into the processing plant. A two-inch line is often laid from the bradenhead to the gathering gas system.

"It follows that with the removal of a well separator, the gathering lateral to that well may be removed, together with the output meter and all other fittings in conjunction with the return of gas to the plant. However, an output meter affords a splendid opportunity of studying the quantities of gas associated with the oil and as long as the well separator is in service, even with the producing of a pumping well, it behooves one to maintain the meter observations when the meter is not needed in more important locations.

"Individual orifice meters may be replaced with recording pressure gauges when a group of wells are changed from continuous to intermittent gas injection. The retention of one master meter for measuring the total input gas volume is considered as economical procedure.

"An influence affecting any decision to replace larger with smaller equipment is contained in the tentative need for the larger material elsewhere, otherwise the labor necessary to effect the change together with the additional investment with the operation of a rapidly depleting property."

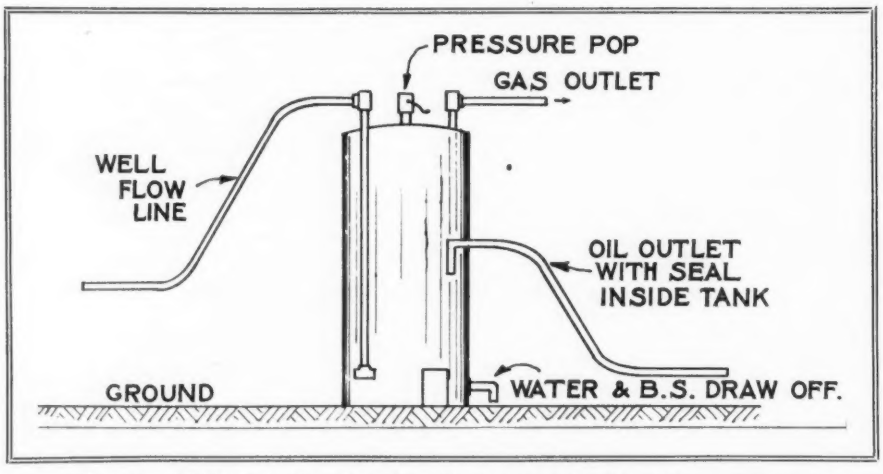


Fig. 4—Welded tank at well after separator has been removed

New Equipment

The Sperry-Sun Well Surveying Co., Philadelphia, manufactures the Syfo clinograph, a new device for measuring deviations in straight hole drilling. The slender instrument can be let down inside a four-inch drill stem by wire line or by the "go-devil" method prior to pulling out the drill steam. At the depth to be tested deviation is permanently recorded on paper by syphonic action of the liquid. Acids are not used.

To operate the instrument the recording paper is inserted in the recording chamber. After selecting the proper size orifice, depending on the depth at which the inclination is to be recorded, the orifice chamber is filled with the recording liquid. The liquid slowly discharges through the orifice into the delivery chamber, filling it gradually until the upper bend of the syphon is reached.

As the liquid reaches the bend it immediately overflows into the recording chamber, gradually rising until the upper bend of the syphon is reached, when again the liquid overflows through the syphon into the receiving chamber.

While passing through the recording chamber the liquid leaves an impression in color on the recording paper, showing the relation of the surface of the liquid to the vertical axis of the brass column at the depth to be tested.

After removing the recording paper the top border of the liquid stain represents a wavy curve. A horizontal tangent to the lowest and highest point of the curve is drawn. The vertical distance H between the high and low point of the curve measured by the scale printed on top of the recording paper indicates directly the angle of vertical inclination.

Advantages claimed by the manufacturer are the obtaining of a direct and accurate record of the vertical inclination, that the test is made in shorter time over the acid bottle, that the Syfo clinograph does not contain acids, that the record is made on paper which may be filed and used as a record, that the daily use of the instrument will enable the driller to immediately correct any deviation, and that the Syfo is ruggedly built and will last for years without decreased efficiency.

The Syfo is not sold. It is leased, rates quoted by the manufacturer.

* * *

The Beaumont Iron Works Co., Beaumont, Texas, subsidiary of the Frick-Reid Supply Corp., and manufacturer of rotary drilling equipment and supplies, has promoted B. Charles Warthen to purchasing agent, and E. J. Roach to plant manager. Mr. Warthen has done most of the purchasing for the company the past few years. Mr. Roach was formerly plant superintendent.

* * *

Norvell-Wilder Supply Co., Beaumont, Tex., has placed T. L. Lewis into its Houston office. Mr. Lewis was formerly for 18 years with A. M. Byers Co., Pittsburgh, Pa.

* * *

Chicago Bridge & Iron Works, 37 W. Vanburen St., Chicago, has published a booklet on the "Hortonspheroid," a tank designed to store natural gasoline and other light oils without evaporation loss.

Installations are shown at plants of the Sinclair Refining Co., Phillips Petroleum Co. and Waggoner Refining Co. A table shows pressures in a closed container storing casinghead gasoline and a graph shows filling losses from pressure containers.

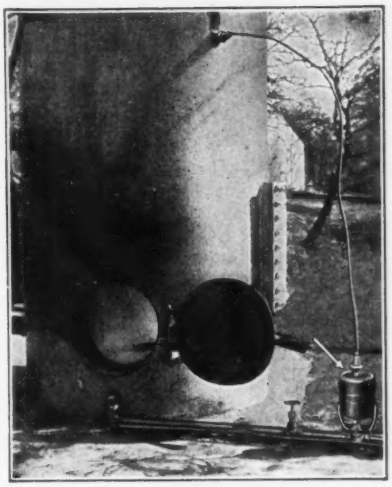
* * *

The Brown Instrument Co., Philadelphia, will add 40,000 square feet of floor space to the plant. This extra space will add two floors to all the new two-story concrete sections of the plant.

* * *

Key Boiler Equipment Co., East St. Louis, opened a Tulsa office July 3 at 733 Mayo bldg. M. B. Crowe is in charge.

For Crude Oil Treating Tanks



Tycos Self-Acting Regulator Controlling Temperatures in Crude-Oil Treating Tank

Tycos Self Acting Temperature Regulator

Constant temperatures in gas fired crude oil treating systems are insured by the TYCOS SELF-ACTING TEMPERATURE REGULATOR. With a tendency towards temperature drop, the regulator valve opens to admit additional gas fuel to the burner; with tendency towards temperature increase the control valve throttles down to restrict the gas supply to the burner.

Through proper control of crude oil treating temperatures, the TYCOS SELF-ACTING TEMPERATURE REGULATOR insures more uniform treating conditions, eliminates dangers of overheating due to excessive temperatures, and maintains the gravity of the crude through continually holding treating temperatures constant.

The simplicity, ruggedness and dependability of the TYCOS SELF-ACTING TEMPERATURE REGULATOR installation makes it particularly adaptable to crude oil treating systems.

The TYCOS line of temperature and pressure indicating, recording and controlling instruments is complete for every gasoline plant or refinery requirement.

Our experience covering a period of years in instrument manufacture and applying these instruments in the oil industry is at your disposal.

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INDICATING-RECORDING-CONTROLLING

Taylor Instrument Companies
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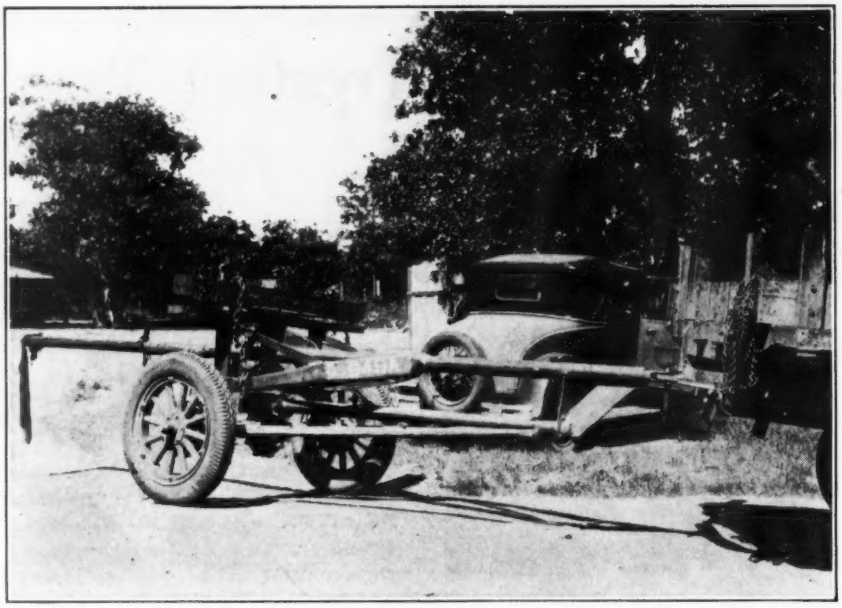
Pumps, Stills, Towers, Condensers, and other Oil Refinery Equipment
Oil Burning Systems

BETHLEHEM STEEL COMPANY, *General Offices: Bethlehem, Pa.*

District Offices: New York, Boston, Philadelphia Baltimore, Washington, Atlanta, Pittsburgh, Buffalo, Cleveland, Cincinnati, Detroit, Chicago, St. Louis.

Pacific Coast Distributor: Pacific Coast Steel Corporation, San Francisco, Los Angeles, Portland, Seattle, Honolulu.



Trailer made from the rear end of old 1½ ton Ford truck. Note how the frame was bent and welded to the draw bar at point where the numbers appear

Trailer Made From Old Ford Is Sturdy Safety Device

ANOTHER Ford rear end has been converted into a light truck trailer. The practice of using the hind legs of an old Henry for this purpose has reached the stage of a high art in the Mid-Continent.

Any number of variations of the idea may be seen on the oil field roads. Each is the result of ingenious planning and all seem to answer the purpose for which they were intended.

The one shown herewith embodies all the latest features of these trailers and is one of the sturdiest found in the whole region.

On its properties in the Tulsa district, the Transcontinental Oil Co., has five of these units working. J. N. Chancellor, assistant superintendent of motor transport, is responsible for their development. They have proven satisfactory and can handle loads up to 1½ tons. In this particular case they were constructed as much for their safety value as for their carrying capacity.

Every oil man is familiar with the hazard of a cross-loaded truck. The Transcontinental has eliminated this hazard by ordering that all material of greater length than the truck bed be carried on the trailer.

As shown in the accompanying cut, the trailer is simply constructed. The frame of an old 1½ ton Ford truck is cut on both sides six feet forward of the rear spring.

Through the point of intersection of the two ends, and through the 4-inch upright above the spring, a 12-foot piece of 3 inch pipe is welded. This makes the draw bar.

The whole is then heavily braced to the uprights below the bolster and it is to this reinforcing that the trailer owes its strength.

It will be noted that all the original drive shaft housing is used. Its old brace rods too are retained in their former position. The forward end of the tube is connected to the draw bar by heavy pieces of sheet steel. Both of the latter are welded in place and form strong braces.

The extension tongue, which passes through the draw bar, is a 16-foot piece of 2½ inch tubing. Both are perforated at one foot intervals behind the bolster to permit the passage of the extension pin.

The bolster plate can be put at any desired height, this being determined by the height of the truck. A second bolster for the truck bed completes the equipment.

The cost of the whole outfit, including the tires and hook-up, is but $90. This is less than one-third the price of a factory made trailer of the same capacity. With reasonable care it should outlast the truck that pulls it. Its upkeep is practically nil.

Natural Gas Book for $1

NEW YORK—An additional 2000 copies of the book "Function of Natural Gas in the Production of Oil," are being sold by the American Petroleum Institute, at a special closing price of $1 each.

The book is written by H. C. Miller, senior petroleum engineer of the U. S. Bureau of Mines and presents in non-technical language findings of two years' study by technical subcommittees of the Institute's gas conservation committee. Experience and opinion of scientists and engineers on the importance of natural gas in oil production and the best means for its utilization are included. Some 5000 copies already have been distributed.

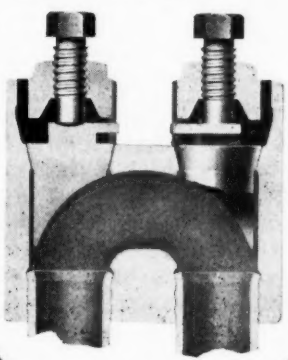
TORONTO, July 24.—Drilling is going on west of Lethbridge, Alberta Province, on a structure covering 14,000 acres. The Texas Co. is drilling three test wells. The Prairie Oil & Gas Co. and Hudson's Bay-Marland Oil Co., are also interested, and the Imperial Oil, Ltd., will shortly begin drilling on acreage obtained from Benton Oils, Ltd., according to reports.

TORONTO.—A flow of 35,000,000 feet of wet gas from Royalite No. 11 in the Turner Valley field of Alberta Province recently indicates new possibilities for the field. Maximum flow, according to some reports, is 58,000,000 cubic feet.

A Good Fitting

Notice the oil passage. There are no corners or reversals of flow direction. Throughout the fittings there is one continuous unbroken channel.

That is why, with the Ohiolock Frictionless, throughput is increased from 15% to 20%—giving greater efficiency and more production from your units.



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The application of Ohiolock Frictionless Return Bends to pressure units is a definite assurance of increased throughput, trouble free operation and long life.

They combine a free flow feature with the quick acting Ohiolock closures and the erosion and corrosion resisting qualities of Hi-Steel.

Let their proven service records for other refineries be your guide—specify Ohiolock Frictionless—"The Good Fitting."

The Ohio Steel Foundry Co.
Springfield, Ohio

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New Truck Trailer Tail Light Is Simple and Effective

A TRUCK trailer tail light that meets an obvious need of the oil industry now is about ready to be put on the market.

The invention of S. C. Phillips, Superintendent of transportation of the Sinclair Oil & Gas Co., in Tulsa, combines all the known safety factors with a wide range of utility.

It has four major parts, reel box for cable, pointed bracket with set screws, metal flag and the light itself. The reel box is below the truck bed and attached to its frame. It contains a spring reel operated automatically with 33 feet dual armored cable. The cable is directly connected to the battery of the truck.

The bracket is illustrated. The base, inside the casing, is one foot long, pointed at one end. The bracket is fastened to the pipe by a set screw and lock nut. On the outer end of the base there are two holes, one for the thumb screw for holding the lamp, the other, either the electrical connection or the steel flag. To the thumb screw is also attached a clip on the cable thus relieving the light connection of all strain.

The lamp presents several innovations. Aside from the large, circular, rear lens, there is one on each side and one on the bottom. The first three are red, the fourth is uncolored.

The bottom lens serves a dual purpose. It aids in lighting the rear of the load and can be used for illumination when changing a tire or making repairs. The lamp can be stuck in the ground with the under lens pointed toward the repair work and the red side lenses gives warning ahead and behind the truck.

An additional advantage of the pointed base is noted when timber or lumber is the load. The point may be driven into the wood. The steel burrs on the sides of the base hold it firmly in place. For lumber up to three inches in thickness the clamp may be used. For rig timbers the burred point is a decided asset.

On the tongues of all the trailers of the Sinclair Oil & Gas Co., a second bracket is permanently placed. Like the one described above, it is equipped to take either the lamp or the metal flag. Though it lacks the movement of cloth flags that are commonly used, it makes this up for this is always presenting a full face to the rear.

Other safety measures have been taken on trucks besides the new lamp and flag. On the left side of the truck both the front hub cap and the winch on the rear wheel are colored a brilliant red. The same color is noticeable on the rear of the truck itself.

The Phillips tail light attached to protruding casing on the rear of a load. Note size of lamp and lenses compared to the 6⅝ pipe

May Require Tankers To Anchor in Fog

WASHINGTON, July 25.—Tankers transporting gasoline may be required to anchor in waters where there is no danger of collision with passenger boats in time of fog.

The suggestion was caused by the collision between the tanker Pinthis and the passenger boat Fairfax June 10 in Massachusetts Bay. Dickerson N. Hoover, supervising inspector general of the steamboat inspection service, has recommended to Secretary of Commerce Lamont that he call a conference of operators of tankers to promulgate a plan for operations in fogs.

Mr. Dickerson has suggested anchoring in still waters, and the establishment of passing lanes for coastwise vessels.

The Pinthis crew came through the investigation of the disaster with flying colors. The steamship inspection men had not a word of criticism for the captain and crew who lost their lives. The captain of the passenger steamship is to be tried on four charges.

All largest importers of U. S. kerosene in bulk quantities took less in 1929 than in 1928. These largest importers are the United Kingdom, which imported 2,792,300 barrels in 1929; China, 2,175,250 barrels; Netherlands, 1,382,000 barrels; France, 1,235,000 barrels; and Japan, 925,420 barrels.

Hydrogenation an Experiment On Commercial Scale

By Arch L. Foster

N. P. N. STAFF WRITER

CLEVELAND.

IN 1926 at the International Conference on Bituminous Coal held in Pittsburgh, reports of a large amount of research work on the hydrogenation of coal and heavy oil residues were made by the two foremost investigators of the subject. Dr. Franz Fischer discussed a method he had developed for the synthesis of hydrocarbons from coal or coke and water. By this process the two raw materials are converted into water gas, containing chiefly molecular hydrogen and carbon monoxide. By the application of heat in the presence of a catalyst, an oxide or mixture of oxides of heavy metals, these two compounds are re-combined to form hydrocarbons identical with those occurring in petroleum, alcohols, and other compounds, the product made depending on the conditions employed in the synthesis. It was by the application of these principles that Dr. Fischer first synthesized methyl, so called wood alcohol, commercially.

Dr. Friedrich Bergius also discussed at this conference the results of more than a dozen years of intensive research to synthesize petroleum hydrocarbons by the hydrogenation of coal and heavy oils, using an entirely different method of procedure. By his method finely pulverized coal in the form of a paste or slurry with heavy oil residues (to permit handling by a pump) is treated with hydrogen in the presence of catalyst and under high pressure and temperature.

According to statements made at that time a ton of coal will produce some 140 gallons of oil similar to petroleum, of which approximately 25 per cent is suitable for anti-knock motor fuel, being composed mainly of aromatic hydrocarbons of the benzene and homologous series.

It was also stated at that meeting that only a small two-ton plant had been operating in Germany. The process was still in the experimental stage, requiring a large amount of work to eliminate numerous difficulties, scientific and economic, with which practically all chemical processes are beset in the transition stage between the laboratory and commercial operation.

Subsequently an agreement was entered into by the Standard Oil Co. of New Jersey and the I. G. Farbenindustrie A. G., the latter controlling the new process, whereby the Standard obtained control of the American rights to the exploitation of the hydrogenation method.

A company, called the Standard I. G. Co., was organized to handle the development of the process, and a large experimental plant is being erected in connection with the Standard of New Jersey's refinery at Bayonne. This plant will continue on a large scale the small-scale research that has been carried on by the company for a year or more.

The announcement was made last week that a new company, the Hydro Patents Co., has been organized to take over the patents of the Standard I. G. Co. The stock of the new company is divided between 17 refining companies, in proportion to their refining capacities.

That the individual refiner is interested in what the development of this radically new process will mean to himself and the industry is to be expected. The readjustments within the ranks of an industry necessitated by the successful com-

CONSIDERABLE newspaper comment regarding the hydrogenation process for manufacturing gasoline from crude petroleum or its heavy fractions has stimulated discussion in the oil industry as to the possibilities of this new development.

To answer some of the questions which are being asked, Mr. Foster, chemical engineer, member of NATIONAL PETROLEUM NEWS editorial staff, has written the accompanying article in which he sums up the development of this process since it was first publicly known of a few years ago as a method used in Germany for making motor fuel from coal.

The conclusions drawn as to the time when the hydrogenation process may become in actual commercial operation in this country are those of the author and are not to be interpreted as coming from the New Jersey Standard, or any other refining company taking an active part in the development of this process.

Refinery of the Tidewater Oil Company at Bayonne, N. J., users of genuine Wrought Iron pipe.

Fairchild Aerial Surveys, Inc., N. Y. C.

Defying the Demons of Heat

With a fibrous structure and a melting point approximately 300 degrees higher than that of ordinary pipe, Reading Genuine *Puddled* Wrought Iron Pipe is much better equipped to fight off the demons of heat that attack pipe in refinery service. That is why Reading 5-Point Pipe shows less deterioration under high temperatures—a greater life-span where conditions are hardest.

Experience has demonstrated that, where high heat is a big factor, Reading 5-Point Pipe does not oxidize as rapidly as ordinary Pipe, and therefore will not scale or be reduced in thickness so quickly. And, at all temperatures, Reading 5-Point Pipe inherently resists corrosion because it is made of the original, Genuine *Puddled* Wrought Iron. To protect you, we put our name and indented spiral mark on every length of Reading 5-Point Pipe.

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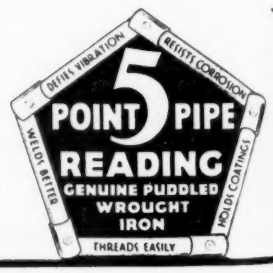

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DIAMETERS RANGING FROM ⅛ TO 20 INCHES

Science and Invention Have Never Found a Satisfactory Substitute for Genuine Puddled Wrought Iron

mercial application to that industry's problems of radically new principles of operation may be, and often are, revolutionary in scope and character.

If the hydrogenation process is destined to raise the art of oil refining to a new level of efficiency, well and good. The sooner this can be brought about the greater benefit that will accrue to the human race.

But it is hardly likely, judging from our present knowledge of the state of development of the project, that revolution will come so swiftly that the members of the industry will not have ample time to make the necessary adjustments, and take full advantage of the new methods without confusion or permanent injury.

The heads of the organization which controls the development of the hydrogenation process have apparently been careful in making statements of certainties which do not yet exist, and in making definite claims which cannot be supported by suitable evidence.

Speakers and writers, discussing the subject, have referred to the process and its effect on the refining industry in rather general terms, dwelling on the magnitude of the benefits to be derived from the perfecting of the method, and the far-reaching results to the nation and the world for its application to oil refining problems.

As to definite, practical figures to show what products may be obtained, their percentages and cost, they have said little. This reticence does not necessarily mean that they have not achieved gratifying results from the experimental work that has been carried out, and which is still continuing. But it does probably mean that they have not yet solved all the problems to be worked out, or that they are not yet certain enough of results to make any definite public statements.

A new product introduced into an already well developed market for that type of product can be expected to dominate that market, and thus eliminate older products only if the new material is superior in quality, or is produced at appreciably lower cost, or if it accomplishes desired results which the older product cannot.

The data at hand are insufficient at present to determine the relative quality of hydrogenated oil and products therefrom. Statements have been made, and no doubt with good reason and supporting information, that the byproducts from the process alone should "carry the load" of the enterprise in commercial operation, and that the process is not yet a commercial success from a gasoline-producing point of view.

The nature and quality of these byproducts has not been made public, but that they could carry the manufacturing costs for the entire process is quite possible and not to be disputed without definite information to the contrary, information which is of course totally lacking.

Hydrogenation Plant To Start Aug. 1

CLEVELAND, July 21.—The commercial hydrogenation plant built by the Standard Oil Co. of New Jersey at Bayway is to start on a test run Aug. 1.

According to E. M. Clark, vice president of the company, this run will continue for 30 days to give the Standard and other oil refining companies who are actively interested in the development of this process for manufacturing gasoline more data on the process than is now available.

After the completion of this experimental run which will test and confirm results found in small-scale operation, it is stated that as full and detailed statement as possible of the present state of advancement of the process and of the results obtained will be made public.

According to Mr. Clark the industry in general has not realized the importance of the possibilities of the process, and this report will give a more comprehensive idea of its magnitude and what has been accomplished so far.

Figures given by Dr. A. C. Fieldner, chief chemist of the U. S. Bureau of Mines, in a paper presented at Montreal a year and a half ago, (see NATIONAL PETROLEUM NEWS, Jan. 16, 1929, page 69), show that the costs for manufacturing a barrel of oil by the Bergius process as given by a German technologist are approximately $4.27 per barrel.

Assuming a 50 per cent yield of gasoline, straight-run and cracked, Dr. Fieldner estimates that the cost of a gallon of gasoline so produced is about 26 cents. He further states that these figures are for production in Germany under conditions existing there. For this country with higher wage scales and other operating costs the expense per gallon will probably be higher, in the neighborhood of 40 or 50 cents.

With gasoline at the refinery at seven to nine cents per gallon, it is obvious that radical reductions must be made in production costs if synthetic gasoline by hydrogenation is to compete with fuel from natural crude petroleum.

No statements or definite costs have been issued by the Standard I. G. Co. officials, but general discussions indicate that the cost has not yet been reduced to a competitive figure in the experimental plants in this country. It is possible, however, that the first estimated costs have been materially reduced by later improvements in the process.

One of the promising phases of the subject is the fact that the Standard-I. G. Co. has made clear all along that no monopoly of the process is planned. In fact it has been expressly stated more than once that the benefits of the new method would be shared by American refining companies and the American public.

Indubitable proof of the sincerity of this attitude was given a few days ago with the announcement that 16 of the larger refining companies were to share with the Standard of New Jersey in developing the process, each to hold shares in proportion to its present refining capacity.

In selecting the larger companies to participate in the de-

Billions of Bubbles

Keep That Temperature Low

THE human body is provided with a remarkable temperature-regulating arrangement — a multi-cellular water-cooling system. The higher the outside temperature rises, the greater the quantity of water drawn from the internal supply . . . bringing about a corresponding increase in surface evaporation and a decrease in body temperature.

Wonderful bit of engineering, Nature's body-cooling system. A perpetual invitation to the natural gas engineer to apply the idea to gas, oil, and gasoline cooling.

The J. A. Campbell Company made the application when they introduced COOL-R-UNITS to the industry. COOL-R-UNITS are multi-cellular . . . can be installed as needed, cut in or cut out as conditions demand.

COOL-R-UNITS are welded construction, tested to a working pressure of 600 pounds . . . interchangeable, easily transported. Standard units are carried in stock ready to be installed on a few hours' notice.

COOL-R-UNITS are fully described in Bulletin No. 7. Write for your copy today.

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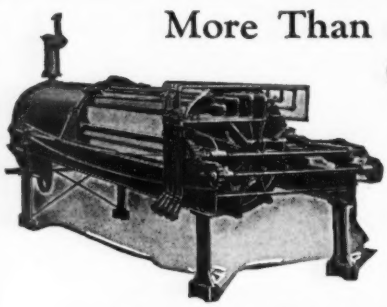

More Than a Score of Kellys Now Cleaning Up Residuum

This suggests two ideas:

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(2) That Kellys are the only suitable filters for this work.

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velopment it appears that the desire was to place the load on those which were financially able to assume the expense of such large-scale experimental work, which expense would place an undue burden on smaller organizations.

Quoting further from the statement issued July 14, "It is expected that the Hydro Patents Company may later offer licenses to use the process and perhaps additional stock to other oil companies, particularly when and if the process shall have been so far developed as to be capable of profitable application in plants of smaller size than those which now seem the minimum. These questions and all other questions with relation to the future policy of the company, however, remain to be determined by the stockholders."

It seems plain, from the foregoing, that whatever benefit is to be derived from the commercial development of the hydrogenation process will be shared in by the entire industry. Due to the experimental status of it at present, it appears doubtful that any immediate revolution of the industry is to be expected from the application of the principles of hydrogenation to oil production or refining.

Just when the process may become an important factor in the oil industry probably no one is in a position to predict. More likely such a revolution will be so gradual, the adoption of the process so well managed that such advantages as it may prove to hold will be obtained with no disruption of the existing structure.

On July 16 a group of 13 representatives of the 17 companies now associated in the Hydro Patents Co., headed by Frank A. Howard, president of the company, sailed for Germany to study in detail the developments recently made in the operation of the process by the I. G. Farbenindustrie.

It is understood that the party will spend a month in Germany, and will return to this country and study the working of the new large-scale plant at Bayonne, which will be completed and in full operation by that time.

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New Refining Patents

Removing Ash-Forming Constituents. U. S. P. 1,760,129, May 27, 1930, application filed April 8, 1926; Herbert G. M. Fischer, Assignor to Standard Oil Development Co.

CYLINDER stocks which have been refined with sulfuric acid contain oil-soluble sodium soaps, left after neutralization of the acid with soda. These soaps comprise ash-forming constituents which are highly objectionable in cylinder oils, but which are difficult to remove by the common expedients such as filtration.

It has been found that if the neutralized acid-treated oil is topped, the heat can be applied in such a way as to decompose the sodium soaps, forming sodium sulfate in a very fine state of subdivision. If this amorphous sodium sulfate is then hydrated with water, with the aid of an organic accelerator of hydration, a concentrated solution of the hydrate will quickly settle out from the oil. The hydration accelerator may be isopropyl alcohol, or another alcohol, or an ether, aldehyde, ketone, acid or the like. The amount of water added must be just sufficient to hydrate the sodium sulfate and dissolve the hydrate, but not enough to cause any emulsification.

What Is Claimed

Removing sodium sulfate from oils by adding enough water to form a hydrated sodium sulfate but not much excess water, adding also an organic hydration-facilitating agent, intimately mixing this agent with the oil and water, and separating the hydrated sodium sulfate from the oil.

* * *

Natural Gasoline Absorption. U. S. P. 1,759,346, May 20, 1930, Clarence D. Coulter, Assignor to Southwestern Engineering Corp.

A MAJOR difficulty in the absorption process of recovering gasoline from natural gas has been to avoid including with the absorbed gasoline those highly volatile lighter hydrocarbons which are below the gasoline range and are not desirable in motor fuel.

The object of this invention is to provide a system of absorption in which the absorbing oil, the gasoline hydrocarbons and the lighter hydrocarbons are cleanly and effectively separated, so that all the gasoline is recovered free from heavy (absorbing) oil and from lighter hydrocarbons, and the heavy oil is recovered free from volatile components so that it is ready for re-use.

This is accomplished by carrying out the absorption at a temperature at which the undesired lighter hydrocarbons do not readily condense, intimate contact between gas and liquid being effected so as to minimize the retention of hydrocarbons normally condensing below the predetermined temperature. Then, in separating the gasoline from the absorbing oil, the evaporation is carried so far that a portion of the heavy oil is vaporized; fractional condensation is then applied so that the heavy oil vapor is first condensed and removed, and finally the gasoline vapor is condensed under conditions unfavorable to condensation of any lighter hydrocarbon vapors.

What Is Claimed

Recovering gasoline fractions from gas by selective absorption in a heavy oil, and separation from the oil by evaporation of the gasoline and a portion of the heavy oil, followed by separate selective condensation of the heavy oil vapor and the gasoline fractions.

* * *

Refining Cracked Gasoline. U. S. P. 1,759,812, May 20, 1930, Thomas T. Gray, Assignor to Gray Processes Corp.

THE sulfuric acid method of purifying cracked gasoline distillates has several disadvantages, chiefly in yield loss and in leaving undesirable substances in the gasoline. A purification treatment has now been developed in which no acid is used; advantage is taken of the polymerization tendency of the impurities in cracked gasolines.

The treatment consists in vapor phase catalytic polymerization of the unsaturated and gum-forming components of the gasoline. The catalyst may be fullers earth, bone black, bauxite, infusorial earth or other solid absorbent. The catalyst bed is kept at about the same temperature as the vapor to be treated. The reaction is exothermic, and outside heat is supplied ony as required for temperature maintenance. This makes it possible to use very simple apparatus, without complicated heating equipment, thus contributing to the economy of the process.

The treated gasoline is stable and has good odor and color. The process may be used in any distillation plant, requiring but few additional parts and no additional attention. In this respect it is an improvement over the inventor's earlier patent (U. S. P. 1,340,889, May 25, 1920) which disclosed the basic idea of vapor phase purification.

What Is Claimed

Refining petroleum distillates containing unstable unsaturated compounds, by passing the distillate in vapor phase around and in indirect heat exchange relation with a solid absorptive catalyst to maintain the catalyst at the vapor temperature, then through the catalyst to effect polymerization, and continuously draining from the catalyst the condensate formed thereon, while the effluent vapor is withdrawn and separately condensed.

The inventor has also been granted U. S. P. 1,759,813, May 20, 1930, covering an improvement on his U. S. P. 1,759,812. The feature of this improved patent is that the catalyst is revivified by a solvent extraction method which obviates the necessity of removing spent catalyst from the catalyzer to be ignited or otherwise reactivated. This takes advantage of the fact that the gums and high-boiling liquids, deposited on the catalyst as polymerization products of the impurities in the gasoline, are soluble in liquids which can be readily used for washing the catalyst in place. Apparatus is specified for continuously maintaining the activity of the catalyst by this means.

What Is Claimed

A process of purifying hydrocarbons by passing them, partly in liquid and partly in vapor form, through a solid catalyst, and continuously dissolving the polymers in the liquid portion and removing them from the catalyst.

* * *

Cracking Oils. U. S. P. 1,761,622, June 3, 1930, application filed Dec. 21, 1921; Carbon P. Dubbs, Assignor to Universal Oil Products Co.

THIS invention relates to an improvement in apparatus for pressure cracking of heavy oils, combining operating economies with such accurate control that the operator may return and rerun the distillate until it is converted into a desired high-grade product.

Two important features are provided by a closed coil in the top of the initial dephlegmator; first there is an efficient preheating effect; and second, the raw oil is kept from contact with the vapors near the top of this column. This prevents carrying over into the receiver light fractions from the incoming raw oil.

Another feature is the return of the relatively refractory pressure dis-

COPIES of United States Patents can be obtained at 10 cents each, payable to the *Commissioner of Patents, Washington, D. C.* Coupons, good until used, are sold in books of 100 at $10. Photostat copies of foreign patents (if not of too recent date) can be obtained from the Commissioner of Patents at prices (payable in coupons if desired) which will be quoted on application.

tillate to dephlegmator, where it is sprayed into the top of the column. This stabilizes the operation by lessening the amount of distillation occurring during dephlegmation. Two or more stages of dephlegmation may be used. This process, applied to mid-continent crudes under 100 to 200 pound pressure, produces a high-grade water-white distillate having Baume gravity from 48 to 52.

What Is Claimed

An improvement in pressure cracking comprising subjecting the vapor to successive cooling actions, first in contact with charging oil from the process, second in indirect contact with charging oil and in direct contact with a lighter oil, and finally in counter-current flow and direct contact with a still lighter and more refractory oil.

* * *

Cracking Oils and Treating Cracked Products. U. S. P. 1,761,340, June 3, 1930, application filed Oct. 27, 1927, and 1,761,341, June 3, 1930, application filed Jan. 7, 1928; Eugene C. Herthel, Assignor to Sinclair Refining Co.

IN THE pressure cracking of heavy, high-boiling, easily cracked oils there is an objectionable tendency to over-cracking, with excessive formation of fixed gas, heavy pitch and carbon.

This difficulty is overcome, in accordance with U. S. P. 1,761,340, by a process of pressure cracking of heavy, easily cracked oils in admixture with a light oil which is much more difficult to crack. Sufficient heat is absorbed in vaporization of the light oil to prevent over-cracking of the heavy oil. Heat recovery is effected by direct heat exchange between vapors from the cracking still and fresh stock, with condensation and return to the fresh stock of a maximum proportion of the vapors of the lighter refractory oil.

What Is Claimed

An improvement in cracking heavy, easily cracked oils, which consists in circulating through a cycle of heating zone, vaporizing zone and refluxing zone a low-boiling refractory stock under pressure, introducing into the cycle a high-boiling, easily cracked stock in direct contact with the vapors in the refluxing operations, and subjecting the mixture to cracking and refluxing conditions with controlled addition of fresh low-boiling and high-boiling stocks in the proportions needed.

U. S. P. 1,761,341 relates to a novel treatment of the tail gases from pressure cracking stills for the production of higher alcohols, particularly butyl and amyl alcohols. The pressure still tail gases are scrubbed with an acid-resisting oil and the resulting solution is treated with sulfuric acid under sulfating conditions. Alcohols are obtained by hydrolyzing the resulting alkyl sulfuric esters.

What Is Claimed

In the production of alcohols from gas or vapor mixtures containing unsaturated hydrocarbons, the improvement which comprises intimately contacting the gas or vapor with an acid-resisting oil, treating the absorbed constituents with sulfuric acid under sulfating conditions, separating the acid sludge and adding water thereto.

* * *

Sulfonating White Oils. U. S. P. 1,761,744, June 3, 1930, application filed December 30, 1925, and in Germany Jan. 26, 1925; Grigori Petroff and Peter Shestakoff, Assignors to First National Bank of Cincinnati.

IN THE sulfonation of petroleum oils the odorless, tasteless hydrocarbon oils known as white oils remain unaffected because they are extremely resistant to sulfonation. It has now been found that by a controlled non-catalytic oxidation at a relatively low temperature these oils are converted into compounds which can be readily sulfonated.

Unsulfonated residual oil from a sulfonation process is oxidized by air, e. g. by blowing moist air through the oil at about 150-160 degrees C. The oxidation is limited to dehydrogenation and so should be stopped as soon as appreciable amounts of fatty acids are formed. The product can be sulfonated in the usual way; and any residue left from the sulfonation can be returned to the oxidation treatment, so that eventually all the oil is sulfonated. The sulfonic acids thus obtained are of the kinds suitable for use as emulsifying agents, or in hydrolyzing fats, scouring wool, etc.

* * *

Contact of Vapors With Solids. U. S. P. 1,761,270, June 3, 1930, application filed Nov. 8, 1926; Walter Miller, Assignor to Gray Processes Corp.

AS AN improvement in the art of catalytic polymerization of unsaturated hydrocarbons in petroleum products, a treating tower has been devised for contacting vapors with a solid adsorptive catalyst.

This apparatus comprises a jacketed tower having at its bottom a funnel-shaped perforated shelf covered first with a metal screen and then with mineral wool to provide a pervious support for an adsorptive catalyst such as fullers earth. The tower is heated by flue gas or a like source of waste heat, circulating around a spiral path within the jacket of the tower. The temperature of the catalyst within the tower is accurately controlled to prevent excessive condensation of liquids in the treating space.

What Is Claimed

A closed treating tower having a vapor pervious shelf terminating in a discharge spout, a jacket wherein hot gases may be circulated around the tower, and a port and valve arrangement whereby hot gases may be passed through the tower.

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Refiners Disagree on Sulfur Question, Believe Study Should Be Made

By Arch L. Foster
N. P. N. STAFF WRITER

THE problem of the maximum permissible sulfur limit in motor fuel should be clarified by exhaustive research carried out by a competent and unprejudiced organization, according to opinions expressed by a number of refiners.

Even those who do not believe that the present limit of 0.10 per cent can safely be increased concur in the belief that the question should be settled as far as possible by an investigation, the results of which should offer a scientific solution of the problem.

Sulfur specifications in motor fuels date back about seven years. The first important discussion of the subject occurred at a meeting of the technical committee on lubricants and liquid fuels, of the federal Specifications Board, with the advisory board of the committee, composed of representatives of the refining industry, at Washington July 12, 1923.

These proposed changes in specifications had been circulated throughout the industry, and the full text of the proposed changes were printed in NATIONAL PETROLEUM NEWS for July 4, 1923. Quoting from a statement by a refinery engineer in position to know some of the details of the happenings at that time we find:

"The basis for the action of the technical committee in recommending to the Federal Specifications Board the inclusion of a sulfur specification seems to have been the representations of the Bureau of Standards and the Navy department to the effect that the doctor test and the corrosion test did not satisfactorily safeguard the interest of the government with respect to sulfur in gasoline.

"In other words, it seems that with no limit set for sulfur, the government was getting gasoline which was high in sulfur, although it was doctor sweet and passed the copper strip corrosion test. Apparently such high sulfur gasoline was causing trouble. It seems that, then as now, there was available plenty of gasoline with a low sulfur content, and little concern was voiced by refiners in regard to their ability to meet the requirements.

"Therefore, there was little or no opposition to the inclusion of a sulfur specification or the limit of 0.10 per cent of sulfur proposed at this open meeting which was held expressly to develop expressions for or against the sulfur specification."

At the time of adopting the present sulfur limit only California was producing large quantities of crude with a sulfur content so high that the question was of any great importance. Refiners were not concerned with the question which did not present a problem.

Since that time West Texas has jumped to the front as a high-sulfur-crude producing section, cracking has increased, and, to those refiners who are refining crude high in sulfur, and to those interested in cracking heavy stocks, the sulfur specifications looms too large to be overlooked.

While a considerable amount of investigative work has been carried out by different searchers in the attempt to determine the permissible limits of sulfur that may be used in the automotive engine without damage under different operating conditions, at least a part of which has been published, the question is far from being settled to the satisfaction of a majority of either the supporters or the antagonists of high-sulfur gasoline.

Diggs[1] and Mougey[2] determined some of the conditions under which different

THE accompanying article gives a brief resume of the sulfur in gasoline controversy, and the opinions of several refiners on the importance of the problem and what should be done about it.

Opinions as to the desirability of raising the present limit differ among refiners. Those favoring the increase are in most cases, though not always, refiners handling crudes or processes which necessitate heavy treating in order to meet present government specifications.

The results of a survey by one company of the sulfur content of commercial motor fuels in several European countries indicate that sulfur in those countries is not high enough to present any real problem, although opinions of European technologists which have been previously published usually do not agree with some of these data.

NATIONAL PETROLEUM NEWS expects to publish shortly the opinions of prominent automotive engineers on this subject, and will welcome any discussion from interested parties on either side of the question.

percentages of sulfur would cause appreciable corrosion in the engine, the former finding that approximately 0.15 per cent showed some corrosion at about freezing temperature and that about 0.45 per cent gave strong corrosive action under similar conditions.

Egloff and Lowry[3] have assembled considerable data to show that corrosion is chiefly a cold weather problem, occurring below freezing temperatures. These authors, with Truesdell[4] recently published data and opinions upholding their contention that the sulfur requirement is too strict and could well be made more liberal especially during warm weather, without loss to the motor user and with a marked saving to the refiner in refining costs and treating losses.

The sulfur content of the gasoline samples collected by the United States Bureau of Mines in July, 1927 showed that, out of 130 samples tested, collected all over the country, seven gasolines contained more than 0.10 per cent sulfur. Two of these, in St. Louis, showing 0.23 per cent[5].

A similar study of the gasolines collected in January, 1930[6], gave 13 samples with sulfur above the standard, out of 153 samples tested.

While no claims are made that the Bureau of Mines surveys are exactly quantitative in representing the status of gasoline throughout the country, it is generally conceded that these studies may be taken as a fair picture of the general situation existing with regard to trends in the properties of motor fuels sold to the consumer.

These reports referred to above, then, seem to bear out the opinion expressed by many in the industry that the sulfur question is of major importance to only a minority of the refiners.

Some Refiners Favor Retention of Present Limit Until Proof is Obtained That More Sulfur Is Not Injurious

The point of view of government technologists is outlined briefly in a statement made by H. C. Fowler, chief petroleum engineer, in charge of the petroleum division of the Bureau of Mines, regarding the sulfur question Mr. Fowler states:

[1]Diggs, Ind. Chem., 20, 16, (1928).

[2]Mougey, Ind. Eng. Chem., 20, 18, (1928).

[3]Egloff, and Lowry, Ind. Eng. Chem., 20, 839 (1928).

[4]Egloff, Lowry, and Truesdell, NATIONAL PETROLEUM NEWS, June 11, '30, p. 41; June 18, '30, p.69; June 25, '30, p. 79.

[5]Bureau of Mines Reports of Investigations, No. 2843, "The Sulfur Content of Motor Fuels," December, 1927, by Kraemer, Lane, and Luce.

[6]Bureau of Mines Reports of Investigations, No. 3026, "A Survey of the Sulfur Content of Commercial Motor Fuels—1930," June, 1930, by A. J. Kraemer. Published in NATIONAL PETROLEUM NEWS, July 9, 1930, p. 39.

Economic Factors Involved On the Problem

"The Bureau of Mines has had a long continued interest in this subject from the purely technologic side, which has been expressed in bureau publications on sulfur in petroleum and its products, and also from the viewpoint of the effect of sulfur specifications on the available supply of motor fuels which meet the specification and the manufacturing costs entailed in meeting the specification.

"It is my understanding, that the Federal Specifications Board has heretofore considered (1) that the limit of 0.10 per cent of sulfur is safe from the standpoint of engine wear and engine performance, and that it is not definitely known that a higher limit would be safe, and (2) a plentiful supply of gasoline is available with a sulfur content below 0.10 per cent.

"This whole problem of sulfur in motor fuel is one which demands the thorough and concerted effort of the whole industry, in order to reach a satisfactory solution. Several factors of the problem are of far-reaching magnitude.

"For example, cognizance should be given to present conditions in the petroleum industry, where efforts have been and are being made to reach a more stabilized condition. A comprehensive and nation-wide study of sulfur in motor fuel necessarily must take account of the likelihood of an increase in the motor fuel supply, by a certain undetermined amount, if the sulfur tolerance is raised.

"What effect will this increase in gasoline stocks have upon further stabilization of the petroleum industry? It is my understanding that a considerable quantity of crude oil is now being held underground in certain fields partly because of various plans of proration now in effect and partly because a comparatively large amount of treating is required to produce specification gasoline from these crudes. If the demand for these crudes as gasoline stock should increase appreciably through raising the sulfur limit in motor fuel, what would be the ultimate effect upon these proration programs?

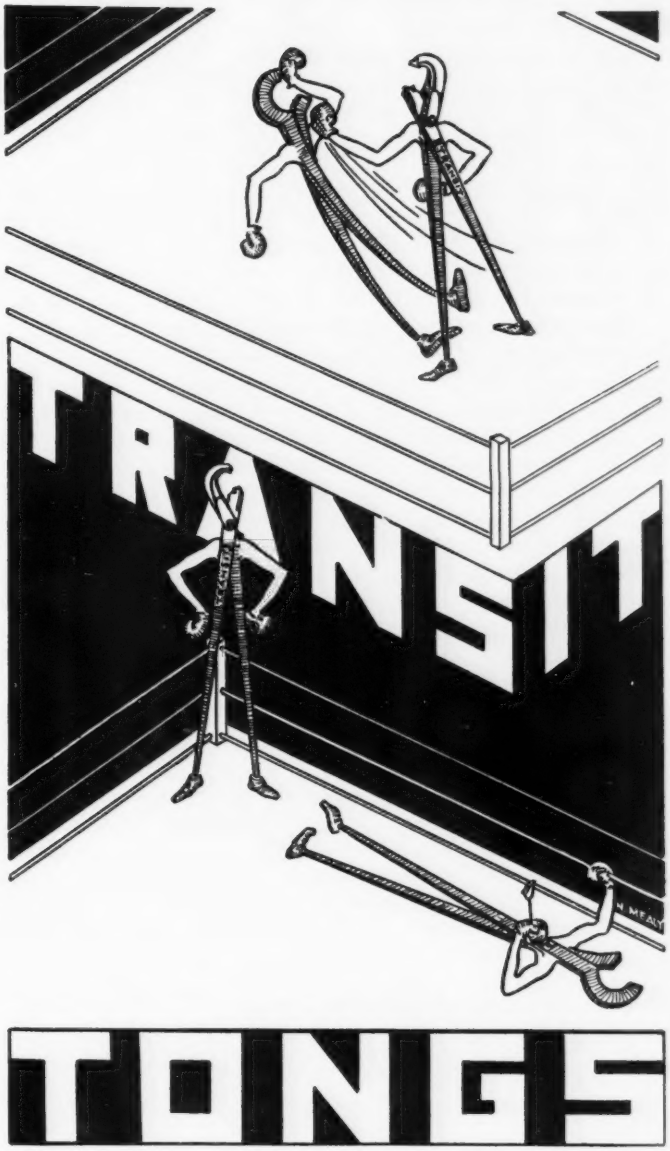
"It would also seem well, in a contemplated study, to consider the ultimate effect if raising the sulfur limit in motor fuel should result in an increase in the supply of gasoline at a time when admittedly more gasoline is held in storage than is required. These are but two of the economic factors of the problem which should be weighed carefully in relation to the technologic factors."

Referring to the claim frequently made that European countries pay little attention to the sulfur question as applied to motor fuels, one prominent refinery technologist discusses the questions raised, and gives the results of surveys recently made in England and other European countries. His discussion, is, in part, as follows:

Why Little Attention Is Given Abroad to Sulfur Content

"In reply to your recent letter regarding my views on the subject of sulfur content in gasoline, we feel very strongly that the present specification of .1 of 1 per cent maximum should be retained as insurance against the possi-

Transit Red-head wins again . . . . .



"Hello, everybody, Grant Memee speaking —Well, the boys are all set to go—Pipe Tong in his corner, doesn't look so good—not so good—Not a cloud in the sky, the field is bathed in a—A-ah, TRANSIT Red Head just comes on, and what a hand this baby gets—In the pink of condition—Best I have ever seen him—There goes the gong—the boys are in the center of the ring—TRANSIT leads with the left—then the right—Pipe Tong slips—he is down—no, he is up—now they are mixing—Pipe Tong slips again—down—looks like he is going to lay down this time—the referee is counting—

"TRANSIT RED HEAD WINS AGAIN!"

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bility of damage from sulfur corrosion.

"It is true that in most European countries very little attention is paid to sulfur content. However, very cold weather is not general throughout Europe and is experienced only in the northern countries in which countries the number of automobiles is comparatively small and the number in use in the winter time even smaller.

"Further, from our experience, it is our opinion that trouble is experienced in these countries due to sulfur content of the gasoline but due to the present state of knowledge and service methods in use in these countries the troubles are not directly attributed to sulfur corrosion.

"During the month of May, 1930, I had a survey made of gasolines in England. The gasoline sold by the company had a sulfur content of .03 per cent; petroleum .04 per cent; Motor Spirits .04 per cent; and Motor Spirits .05 per cent which tests clearly indicate that the gasolines being sold by the above companies are well within the sulfur specifications as now existing in this country.

"In October, 1929, 16 samples of motor fuels were collected throughout Germany from the most important distributors. Care was taken that all these samples represented gasoline made by different refineries.

"The highest sulfur content found on any of these samples was .09 per cent and the lowest .02 per cent, the average being about .05 per cent.

"Out of the 16 samples, all but three contained rather large percentages of benzol, nine out of the 16 samples having sufficient benzol to show a gravity of 46. One sample of motor fuel had a gravity of 31.2 with an initial of 170, a 50 per cent point of 182 and an end point of 270. This sample, obviously, being almost a pure benzol. The sulfur content of this sample was .05 per cent.

"I could give many other such examples of gasoline from different foreign countries but do not feel it necessary at this time. We watch the gasoline sold in Europe carefully and from the work which I have had done I do not feel that it is at all a general thing in Europe for the sulfur content of gasoline to be high. In fact, it is an exception.

Survey in England Showed Small Amount of Sulfur

"It is possibly true that European specifications do not emphasize the sulfur content of the gasoline but this is no doubt due to the fact that the gasoline they obtain is low in sulfur content and not having experienced any trouble they have not become conscious of the necessity of limiting the sulfur content.

"Therefore, I cannot agree with the part of your letter stating that 'It is well known that, in most, if not all, European countries, very little attention is paid to the sulfur content of motor fuels.'

"On this basis, therefore, I do not believe that it is plausible to quote European fuels as an argument in favor of higher sulfur specifications being permissible from a point of potential damage from sulfur corrosion.

"In regard to the next paragraph of your letter, it is true that an increasing number of motor cars are being equipped with crankcase ventilators, thermostatic jacket temperature controls, etc., for improving operating conditions. But from our experience and from the experience of a number of the larger automotive research departments of prominent manufacturers, it has been clearly demonstrated that during cold weather particularly, corrosion due to sulfur in the gasoline reaches serious proportions.

"From an economic standpoint, there is no justification for the refiner to quote the millions he could save by being allowed to raise the sulfur specification without taking into consideration the great amount of money represented by automotive equipment which would unquestionably be damaged by removing the sulfur specification.

"If the entire policy of refining were regulated by the amount of money which could be saved by eliminating treatments now necessary to produce specification products, it would not be necessary to do anything but top the crude. Such a policy is obviously absurd.

"We are in sympathy with any movement working towards an exhaustive study of the corrosive effects of fuels containing various amounts of sulfur, such a study to be made by a disinterested party. I am rather in doubt as to just what organization we would consider disinterested with the exception of the Bureau of Standards."

As stated before, most of the refiners agree that a study to determine the permissible limits of sulfur should be carried out, as is shown in the following quotation:

"I believe that the government is justified in maintaining the present limits until more definite data are presented to prove the specifications are too severe. I believe, however, that the problem warrants thorough investigation and I personally believe that the research departments of the automobile manufacturers should be the ones to act as judge."

One refiner believes the proponents of high-sulfur should investigate first:

"It seems to us that in view of the fact that the majority of refiners are able to meet the present requirement without difficulty, those refiners who are having difficulty in producing gasoline sufficiently low in sulfur should demonstrate by experimental work that a higher limit would be safe before any disinterested organization takes up the investigation.

"In other words, we do not feel that any collective effort to solve this problem should be made until real evidence is presented by some interested party that high sulfur gasolines are safe to use.

"We do not think that th

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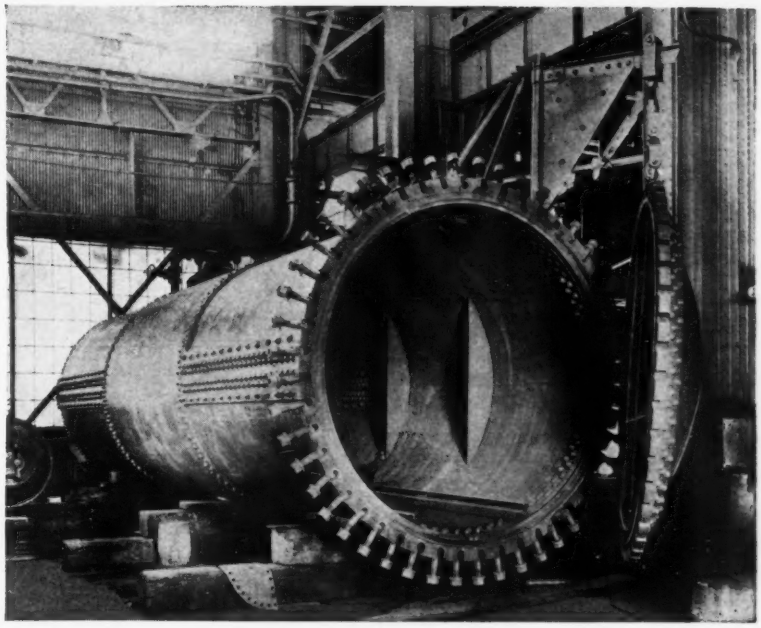

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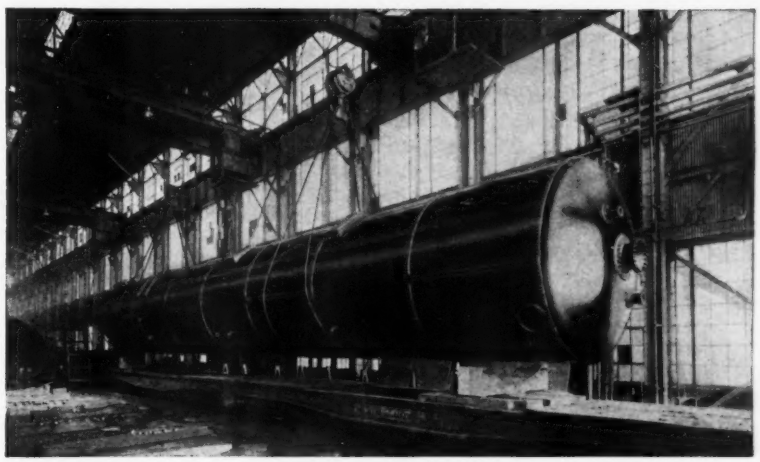

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problem is of sufficient importance to the petroleum industry as a whole at the present time to justify collective study."

"Maintain the Present Limit Until Full Data at Hand"

A large number of refiners are of the opinion that the limit could safely be raised, and that a thorough study would disclose information that would probably support such a contention. All seem to be in agreement, however, that not enough data are available at present to justify the change, and that the data already available are so conflicting in some cases as to fail to offer indubitable evidence on either side of the question.

The following quotation, from a refiner in close touch with the situation both in the industry itself and in the government, outlines the problem and has reactions;

"This 0.1 per cent has been based more on an abstract fear of high sulfur than on any detailed data to support it. The information for and against such a specification is so fragmentary and conflicting that most of us in the industry have been reluctant to urge a change.

"Several years ago the specification was unimportant since there was little tendency to exceed it and there was consequently little if any economic waste in its strict observance. The situation has changed completely in the last few years. Among the contributing factors to such a change may be mentioned the following:

"1. The production of high sulfur crudes, principally in West Texas, has confronted the refiners with the necessity of manufacturing gasoline from a large amount of the straight run product containing considerably more than the permissible 0.1 per cent sulfur. Of the 2,000,000 bbls. per day of crude now produced east of the Rockies, approximately 25 per cent gives a crude gasoline of sulfur content greater than the present limit. Considering the yield of straight run gasoline from the crude, this amounts to more than 100,000 bbls. per day of gasoline which needs to be specially treated in order to make it acceptable in sulfur content. This gasoline is furthermore among the most desirable gasoline sources, since the high sulfur crudes are in general producing gasoline which has the lowest tendency to detonate in automobile and airplane engines.

"2. The increased cracking facilities of the country, installed in order to meet the increased gasoline demand at the lowest economic waste, are now capable of handling the high sulfur gas oils, which were formerly diverted to fuel oil, the low sulfur gas oils only being used as cracking stock. The cracking of these high sulfur oils is furnishing a high sulfur cracked gasoline, the sulfur of which is even more difficult to remove than that of the straight run gasolines.

"So far sulfuric acid is the most successful and practical sulfur removing agent discovered and most high sulfur gasoline is so treated in order to bring it within the limit of the Federal specification. Aside from the cost of the acid used and of the operation involved in the treatment, the losses incident to such treatment are high and these two factors combine to give an appalling total cost which must be laid at the door of the sulfur specification. It has been estimated that elimination of sulfur from gasoline is costing this country as high as $50,000,000 per year.

$50,000,000 Spent Each Year To Eliminate Sulfur

"It is rather generally believed that the sulfur limit on gasoline can be raised and that at least a large part of this expenditure can be saved and the waste stopped. As stated above, however, definite data are needed before such a course can be adopted. The problem is too big and too complex to be satisfactorily handled by any unit of the petroleum industry, and the possible results of such an investigation are so far-reaching as to justify amply expending *public* funds on such an investigation."

A Mid-Continent refiner believes that an injustice is being done the industry in thus retaining a low limit of sulfur without adequate data to support such a stand—;

"Referring to your letter of May 20th, I agree with you that a careful study of the sulfur problem with respect to gasoline, such study to be made by a disinterested investigator, would be very beneficial inasmuch as it would reveal the facts as to the supposed effects of various amounts of sulfur in motor fuels, and I am confident these results would indicate that a much wider limit should be set upon the quantity which would be permissible without injurious effect.

"I believe that this question is somewhat similar in nature to that of gum content in gasoline, inasmuch as it is not the *quantity of* sulfur present that determines its injurious effect but rather its existence in certain sulfur compounds or in the free state, in which condition it is liable to cause trouble. So far as I am able to learn, the difficulty due to sulfur in motor fuels is of very rare occurrence, but from what I can learn it seems that the present limit was set by the Government practically to remove all of the sulfur from the motor fuels and thus be on the safe side. This is an injustice to the refining industry, inasmuch as it results in a large unnecessary expense in a great many instances."

The manufacturer of a nationally used motor fuel acknowledges that trouble has occurred in using fuels high in sulfur but believes that we should find out if a slightly less drastic limit might be permitted without injury:

"I have your letter of May 20 with reference to the possibility

of increasing the present sulfur content allowance of 1/10 of 1 per cent in motor fuels. I agree with you that the present figure must have been arbitrarily established and think that it would be very profitable for those interested in the problem to have some unbiased organizations conduct some extensive tests to see whether the limit can safely be increased. We know that trouble has been caused in the field from time to time when the sulfur content was unusually high, but we do not know whether serious trouble would be caused by a sulfur content of 12 to 15 hundredths of 1 per cent."

Another Mid-Continent refiner suggests an organization to conduct an investigation:

"This question is a very important one and one that should be thoroughly investigated. I believe that the present limits are entirely too low and that a proper study of this question would develop some very interesting facts. Such a research might well be sponsored by the American Petroleum Institute, provided that the investigation be broad enough to cover this subject in a thorough manner."

Suggests Petroleum Institute Sponsor Research

A small refiner in one of the midwest states finds that no corrosion results even when using waste material from tne plant in company cars:

"We treat it for the market in order to meet the requirements, but we have never felt that it was any better motor gasoline after being treated.

Our opinion . . . . is based on the fact that we have been using the refuse of the plant in our own cars, that we use on the properties, for more than 12 years and we have never yet found any corrosion from sulfur, or other sources, on any one of them.

The gasoline our men use there is colored with oil, in addition to having the sulfur in it, and is not merchantable gasoline in any sense of the word.

The spark plugs probably get dirty quicker than though oil free gasoline was used, but no corrosion has ever appeared."

From these letters it is apparent that the opinions of refiners differ widely as to the importance of the question and the relative danger to the engine of using fuel high in sulfur. Most are agreed that it would place the matter on a more authoritative basis if an exhaustive study is made by a neutral organization capable of reaching a dependable conclusion which would be accepted by both producer and consumer as representative of the facts. It is of great interest to note that the Cooperative Fuel Research Steering Committee has given this matter considerable attention and that a committee to carry out an intensive investigation may be organized by that body within the next year.

Several correspondents have pointed out one phase of the problem that as yet has not received much attention in the literature, that of the possible danger to public health of the presence of appreciably greater quantities of sulfur oxides in the atmosphere of especially our larger cities. Obviously this condition would be aggravated in proportion to the increase in the average sulfur content of the motor fuels burned, and might easily become a real menace to health in congested districts. Such a contingency must be considered by any organization undertaking the study of the problem, as it is possible that health authorities may take a hand in the event that danger from this source appears likely.

Canada Using More Gasoline

TORONTO, July 22.—Summer gasoline business in Canada is good, according to oil companies there. McColl-Frontenac Oil Co., in a recent statement accompanying dividend checks, says that sales of gasoline and oil so far show substantial increases over last year. The British-American Oil Co., Supertest Petroleum, Ltd., and Thayer's, Ltd., report increases also.

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by

H. S. Bell

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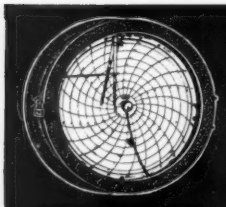
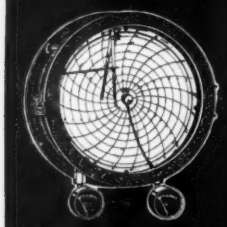


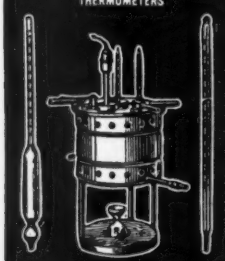
RECORDING THERMOMETERS AND PRESSURE GAGES



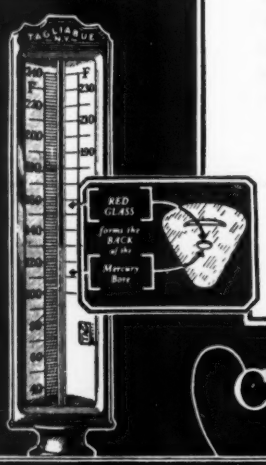
RECORDER - CONTROLLERS

AUTOMATIC CONTROLLERS

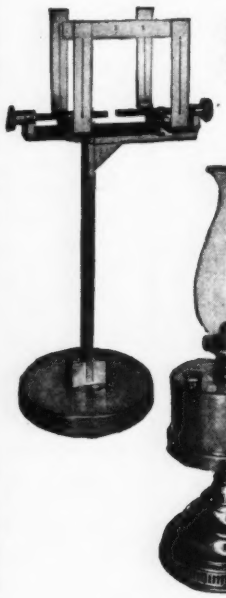
DIAL - INDICATING THERMOMETERS



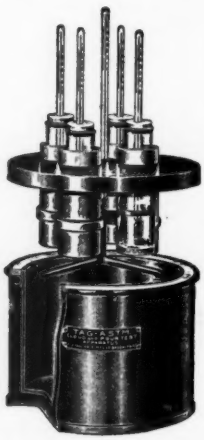
OIL TESTING INSTRUMENTS, THERMOMETERS, HYDROMETERS, ETC.



TAG Oil-Testing Instruments for Gasoline and Kerosine

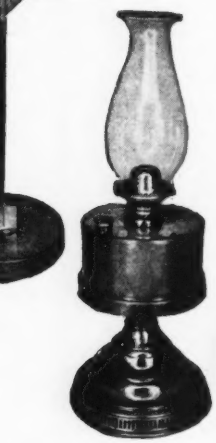


Rather Burning Test Gage for burning test of kerosine.

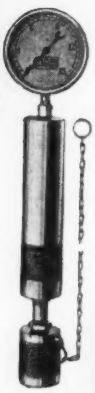


TAG A.S.T.M. Cloud and Pour Test Apparatus for "Cold" test of kerosine.

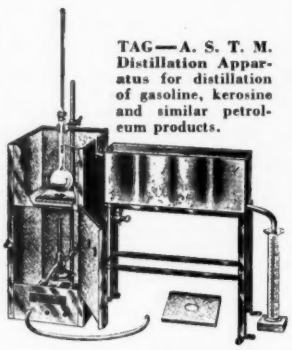
TAG Closed Tester for determining the flash point of volatile flammable liquids.



Saybolt Standard Lamp used with Rather Gage for burning test of kerosine and illuminating oils.



Reid Vapor-Pressure Bomb used for determining gasoline vapor-pressure above atmospheric pressure.



TAG Saybolt Standard Universal Chromometer and TAG Standard Daylight Lamp for determining color of gasoline and kerosine.

TAG—A. S. T. M. Distillation Apparatus for distillation of gasoline, kerosine and similar petroleum products.

TAG—A. S. T. M. Sulphur Determination Apparatus for gasoline, kerosine and illuminating oils.

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Excess Water Used In Quenching Coke Causes Trouble at Power Plant

By D. O. Lima*

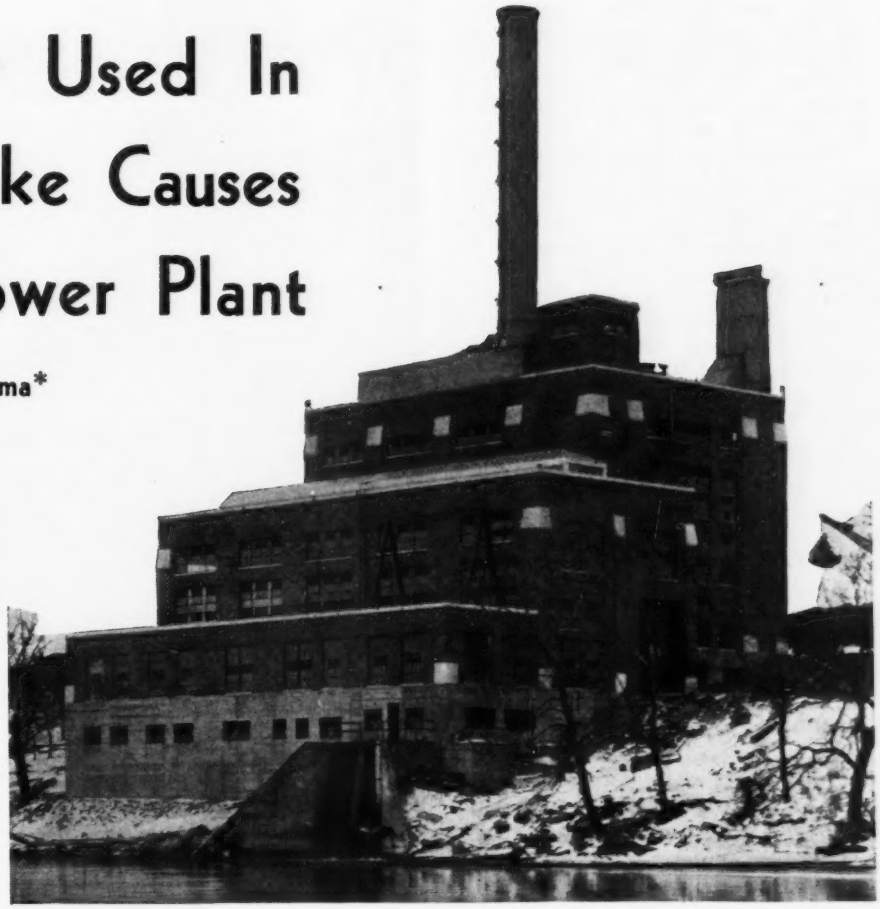

Fig. 1—Lincoln Beerbower station of the Oklahoma Gas and Electric near Ponca City

IN 1929 Byllesby Engineering & Management Corp. designed and built the Lincoln Beerbower steam power station of 15,000 KW initial capacity (30,000 KW ultimate) to use pulverized petroleum coke as fuel. This station is operated by the Oklahoma Gas & Electric Co. and is located on the Arkansas River near White Eagle, (Ponca City), Okla. The station was put into operation in December, 1929.

At present the boiler room is equipped with two Springfield boilers with water cooled side walls and back wall; each unit rated at 150,000 pounds of steam per hour, and two Riley Atrita (impact type) pulverizers and two Riley burners to each boiler. One Ljunstron regenerative preheater heats the combustion air for each boiler. A cross section of the station showing fuel handling and burning equipment, together with an outside view of the building, and a view of a boiler front are shown herewith.

The petroleum coke burned at this station is loaded at nearby refineries into Oklahoma Gas & Electric Company hopper bottom cars. These cars are dumped into an outside hopper which feeds into a Beaumont double roll crusher. The crusher discharges into an automatic skip hoist system which delivers the coke into a tram car traveling over and distributing into two bunkers, from where flow is by gravity to the pulverizers.

In certain processes of distilling oil at the refineries a residue is left in the still at the end of a distillation period. This residue is the result of cracking of the oil during distillation and is called petroleum coke. In order to facilitate removal of this coke, cables are suspended in spirals inside of the stills and held in place by iron wire. The coke is broken loose by pulling this cable from the sides of the chamber, thereby making it accessible for easy removal. A good deal of this wire remains embedded in the coke. As soon as the coke has been removed from the still it is quenched with water to prevent burning, and frequently enough water is used to completely saturate the coke.

The petroleum coke is composed mainly of carbon, hydrogen, and sulphur. A typical analysis of the coke burned at the Lincoln Beerbower station is as follows:

	As Received	Dry	Ash & Moisture Free
Moisture	5.0		
Ash	1.0	1.0	
Volatile Matter	13.0	13.7	13.8
Fixed Carbon	81.0	85.3	86.2
B.T.U.	15,100	15,900	16,100
Carbon		94.0	
Hydrogen		4.0	
Sulphur		1.0	

When the coke received at the plant is saturated with water (about 13 per cent moisture) pulverizing is very difficult, and in cold weather the coke may freeze into a solid

*Chemist, Oklahoma Gas & Electric Co.

THE attention of refiners who are producers of petroleum coke, especially from cracking stills, is called to the discussion in the accompanying paper which outlines some of the advantages of using this material as pulverized fuel.

Particularly does the author point out some of the properties and characteristics of coke which militate against the convenient use of in pulverizer equipment. Some of the properties are inherent in the material, but most of those mentioned, presence of wire, moisture, too little or too much volatile matter, and a generally wide variation in the quality of the plant product can be controlled and corrected by the manufacturer.

Other prospective or actual users of petroleum coke have expressed essentially the same objections to coke as at present manufactured by many refiners, and a proper recognition of these drawbacks to the use of coke, and a serious effort to correct them as far as possible, would doubtless tend to increase the use of this fuel very greatly.—Editor.

mass, which is difficult to unload and transfer to the crusher.

The embedded wire causes more or less trouble by becoming entangled with coal handling and pulverizing equipment. Magnetic separators are not capable of completely removing all of this wire.

Sometimes the coke received is almost saturated with oil and in this state the coke is gummy, which condition frequently causes immediate reduction of plant capacity, and occasionally causes a shut down of fuel handling and burning equipment. In addition to the crushing and pulverizing equipment plugging up with this gummy product, the diffusers on burners choke up and burn out.

At other times the coke is perfectly dry and so thoroughly coked that insufficient volatile matter remains for the coke to burn readily. With low volatile matter content the coke is hard to ignite and the flame tends to leave the burners or to go out entirely.

Originally the water walls in the boilers at Lincoln Beerbower station were bare and consequently there was but a small amount of hot surface

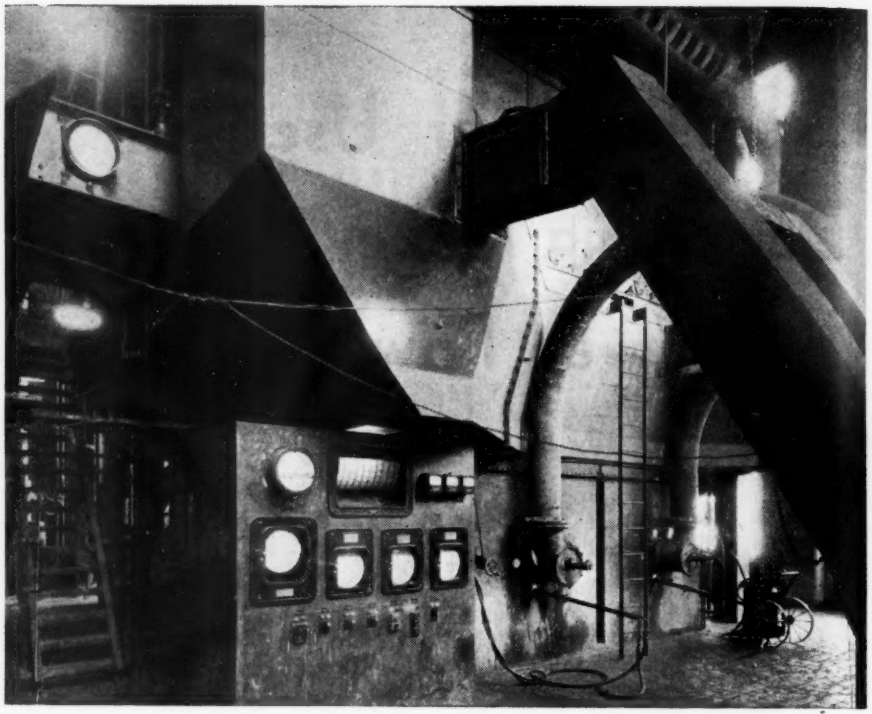

Fig. 3—View in boiler room of station, showing pulverized coke duct pulverizer to burners

in the furnace to radiate heat to the incoming coke and raise it to the ignition temperature. Parts of the water walls have been recently covered with refractory material to increase radiation in the furnace and this change has helped materially in maintaining good combustion on low volatile coke.

The minimum volatile matter content which will give continuous combustion at this station after partly covering the walls with refractory is about 12 per cent. The difficulty in maintaining good combustion is entirely a matter of heat radiation in the furnace and volatile content of the coke, since the fineness of pulverization is consistently maintained at above 90 per cent through a 200 mesh sieve.

Advantages of petroleum coke over coal as pulverized fuel are (1) high heat content per pound, and (2) low ash content. In our experience, the power required for crushing and pulverizing is about the same for a ton of coke as for a ton of coal, and consequently the higher heat content for a ton of coke means a slightly lower power consumption in the preparation of the fuel. The low ash content tends to decrease (a) furnace refractory erosion, (b) ash

(*Continued on Page* 107)

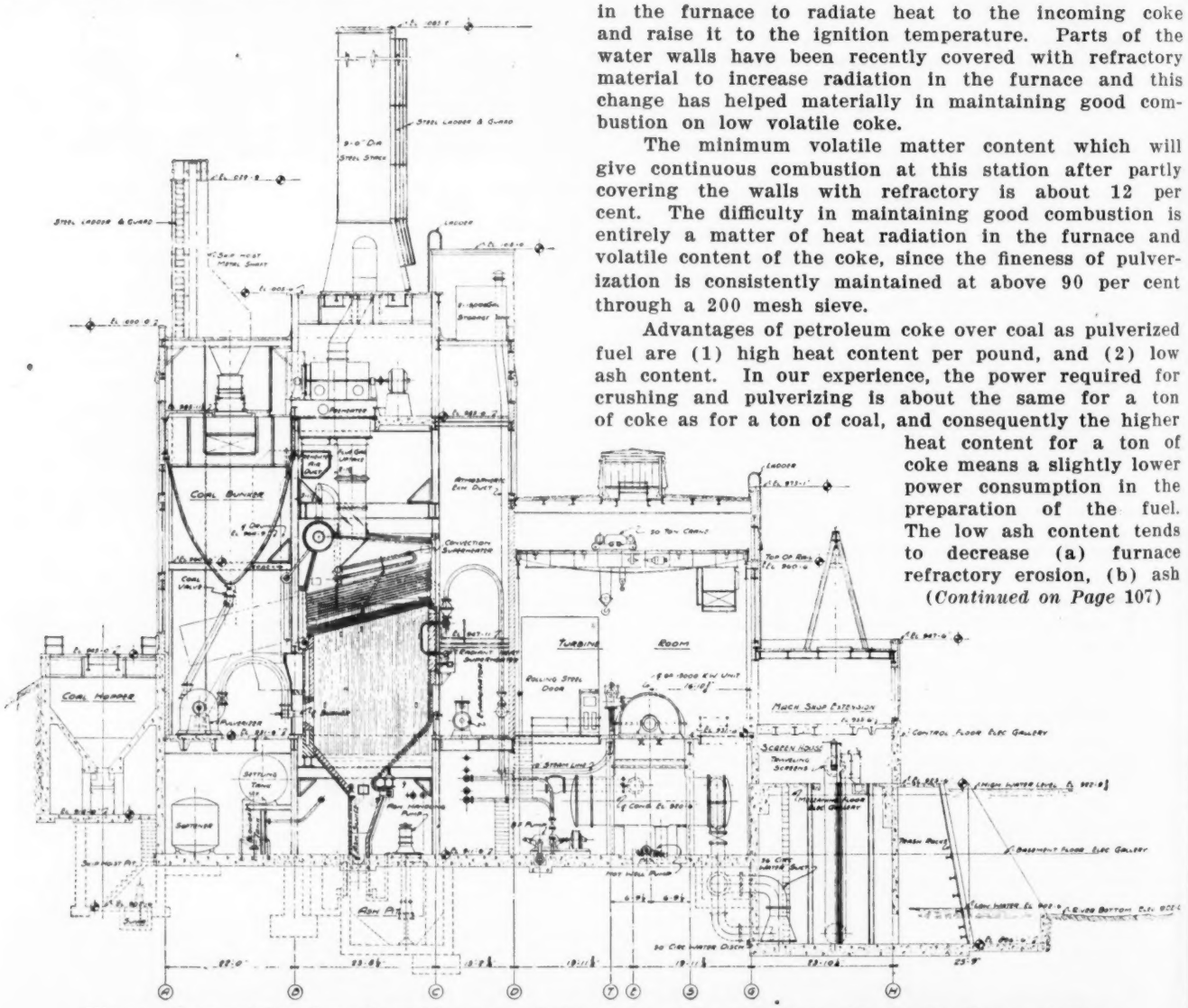

Fig. 2—Cross-section through turbine room, boiler room, and screen hose, Lincoln Beerbower station

ADVERTISING PAGES REMOVED

Findlay Boasts 3 One-Stop Stations In Cut-Price Gasoline Market

By E. L. Barringer
N. P. N. STAFF WRITER

FORTY years ago Findlay was in the throes of an oil boom. Petroleum had been discovered in the late '80's in the Trenton Rock lime of Lima field, and oil and gas were plentiful. Tales still persist of the good old days—natural gas was free and in some nearby towns a modest charge of 50 cents a month per stove was made. It was easier to let the gas burn all night than to turn off the jet.

Today Findlay retains some of the old production atmosphere, although the main theater has moved on to the southwestern states and the west coast. The Ohio Oil Co. still maintains headquarters in Findlay. The Buckeye Pipe Line Co. has an office here. The National Refining Co. has a refinery near the west corporation line running on local crude. But the dominant oil interest of today is at the other end of the line—marketing.

Ordinary "gas stations" do not cause a stir. There are too many and they are too common in these days. It takes the big one-stop service stations to excite comment. And Findlay will have three of them before the summer is over. Thereby hangs the tale of whether three in a town of 20,000 population is indicative of an over-built market.

So far the tire interests have taken the lead in building one-stop stations in Findlay. The oil industry has refrained from expanding its merchandise line. First in the new type of automotive service buildings was the Cooper Tire Co., a local manufacturer. That was last December. Then the Goodyear interests moved its distributor into a station, opened about June 1, and Firestone's station will be ready by August.

Now Findlay as a city is typical of that large number of medium sized communities all over the country. The postoffice ranked it as a city of 23,000 population and the Chamber of Commerce hoped it had 21,000 persons. But the 1930 census let the town down with only 19,386 population.

In one respect Findlay holds an advantage over similar sized towns. It has a larger portion of real business executives, as against the absentee ownership of many industries that leaves little executive ability to manage plants in smaller towns. Findlay boasts being the home of the Ohio Oil Co., with its many executives now housed in an office building that would do credit to any city of major rank. Then there is the National Refining Co., home office in Cleveland, but Findlay has a complete refinery and is a division sales office. The Buckeye Traction Ditcher Co. also is one of the large local industries.

Main street is main street to Findlay. From the north to the south it is five miles long. Industry is along the western corporation limits and in the northeast district. To the southeast district is the better residential section. About 95 per cent of the tourist traffic moves along Main street; from Detroit and Toledo on the north over the Dixie highway to central and southern Ohio and the south.

The oil industry presents its best retail front to Main street. All the major distributors have service stations along this main thoroughfare. The three one-stop stations are here also. Cooper's is on the south end of the business district, Goodyear's on the north, and Firestone's will be in between, north of the court house.

Five full months of operation had passed for the Cooper station when NATIONAL PETROLEUM NEWS made its survey. Those were months without competition from other one-stop stations, and months when tourist traffic would be at low ebb.

In this period the Cooper station sold $56,378.12 worth of merchandise and service. Of the 11 departments, tires and tubes produced the biggest vol-

How a One-Stop Tire Service Station in a City of 20,000 Fared in First Five Months Without Competition from Similar Stations

Cooper Tire Co. One-stop Station, Findlay, Ohio

Departments	Gross Sales, May 1930	Per Cent Five Months**	Operating Expense Per Cent Five Months**	Net Profit Per Cent Five Months**
Tires and tubes	42.40	40.00	18.56	5.10
Batteries	1.20	2.02	68.00	—38.50
Tire repairing	3.20	2.00	70.00	— 2.20
Battery repairing	.60	1.00	85.00	13.30
Others	1.10	2.23	20.00	15.60
Lubrication	2.35	2.92	76.50	2.50
Brake servicing	3.80	4.10	72.00	6.00
Washing	2.70	2.80	95.00	4.00
Gasoline	37.70	36.75	18.20	.24
Oil	5.65	6.16	29.00	16.00
Totals	$14,013.12	$56,378.12	27.80%	3.20%

*Accessories
**January, February, March, April, May, 1930.

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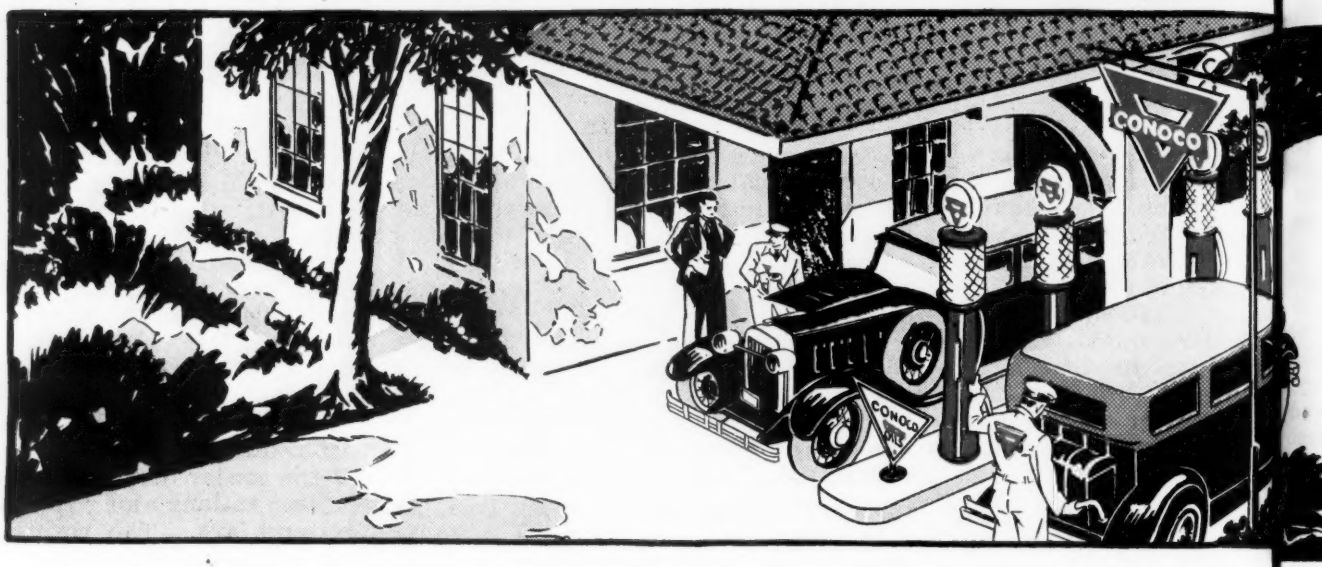
FOR THE RAPID SALES



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(CONOCO OIL CO.) Chicago, Illinois

ume of gross sales, 40 per cent. Gasoline was second with 36.75 per cent, and oil was third with 6.16 per cent. The combined petroleum sales, gasoline, oil and lubrication, amounted to 45.83 per cent of the total gross sales. The total tire income, tires, tubes and repairing, was 42 per cent.

In net profits the station made 3.20 per cent in the five months. Tires and tubes made 5.10 per cent net, gasoline 0.24 per cent, and oil 16 per cent. Net profits from the three oil products were 18.74 per cent while the net profit from tires and repairing was 2.90 per cent. Tire repairing declined 2.20 per cent. An accompaning table shows the gross sales, per cent of operating expense, and the net profits for the five months.

The main items sold at this station were tires, gasoline, and motor oil. Together they comprise about 83 per cent of the gross sales. Since there are no available datas on the tourist patronage in Findlay, and at best it is an elusive figure as regards its importance in the automotive service field, let us look at the local market and its relation to the one-stop field.

From the tire viewpoint these three one-stop stations merely mean a realignment in distribution facilities. The Goodyear and Firestone distributors were in business before, and the new stations mean a move to a new location, in a different type store building. For Cooper, the one-stop station means a different type of marketing policy. Previously Cooper had several dealers in Findlay and these are continued. The one-stop station was its first plunge, and so far the only one, in direct retailing from the factory. Whether other stations will be built is problematic yet, but the company may start one in Lima, O., 35 miles to the south, as a test of what it can do on foreign ground.

From the viewpoint of gasoline and oil, the biggest combined department in the Cooper station, the three one-stop stations involve additional competition for business in an already overcrowded and cut price market.

According to the Chamber of Commerce figures there about 6,800 trucks and passenger autos in Findlay; 6,700, to be exact, as of June 1, and the allowance for local autos registered outside the county is 100. For Hancock county the total truck and auto registration was 14,109 June 1.

A survey by NATIONAL PETROLEUM NEWS early in June showed 39 drive-in service stations, 23 curb pumps and two one-stop stations selling gasoline and oil. Three service stations were closed.

That competition is keen for the local gasoline business is indicated by a few mathematical computations. Ignoring for the moment the 23 curb pumps we find 41 drive-in stations (39 oil company and two one-stop stations). These 41 stations, with 6,800 registrations, have an average of 166 local customers per station. Obviously the curb pumps do some business or they would be taken out, and then there are the tank wagon sales to large consumer accounts not figured in.

Allowing the service stations all the business from these 6,800 registrations, the average annual gallonage per station would be 88,445 gallons. This figure is arrived at by taking the 1929 consumption, which showed that each registration in Ohio, consumed 532.8 gallons. The average margin in Findlay is 3 cents a gallon so the gross profit on this 88,445 gallons would be $2,653.35 a year. That is assuming, of course, that the station follows the average.

In following up the Ohio average consumption of 532.8 gallons for last year, the local demand would be about 3,625,000 gallons a year for Findley. That is, for the autos and trucks registered locally, not estimating tourist and out of town patronage. Circumstances alter the average in computing the business done by individual companies, and for Findlay the National Refining Co. and the Standard Oil Co. of Ohio probably get more than the average. National Refining's claim comes in being a local institution, with all the ramifications that implies, plus the advantage of a larger executive staff than the out-of-town oil companies. The Ohio Oil Co. has no marketing facilities, but it is one of the Standard group, so there is ample justification for the assumption that the company, and officials, might have a leaning towards Standard Oil when buying.

Add to this situation the cut price element. For the last three years Findlay has been a local storm center in the Ohio price situation. Lower retail prices came along in 1927 through the advent of the bulk service station movement.

Back in those days the posted price of the Standard of Ohio, was 21 cents at the service station. Standard had built some bulk service stations, selling at 19 cents, the posted tank wagon market. Competing companies recognized the 19 cent price, and aside from regular Standard Oil stations, that was the prevailing price in Ohio. Among the bulk service station builders was Maurice Wolfe, of

Gasoline Retail Outlets at Findlay, Ohio

Company	Company Operated Stations	Dealer Stations	Curb Pump Installations	Total
Standard Oil Co. of Ohio	3	3	6	12
Refiners Oil Co.	2	3	5	10
Paragon Refining Co.	3	3*	4	10
National Refining Co.	2	2	3	7
Johnson Oil Refining Co.	3	1	1	5
Sinclair Refining Co.	0	4	1	5
Shell Petroleum Corp.	2	2*	1	5
The Texas Co.	2	0	1	3
Cut Price Stations	2	0	1	3
Hickok Producing Co.	0	2	0	2
Cities Service Oil Co.	0	1	0	1
Total	19	20**	23	62**

*One split account station, with pump from each company.
**Split account station counted only once.

One-Stop Stations

Company	Gasoline Sold
Cooper	National Refining and Standard of Ohio
Goodyear	Standard of Ohio
Firestone (under construction)	Undecided

ADVERTISING PAGES REMOVED

Piqua, O., and one of his stations was opened in Findlay selling at 15 cents, cost laid down plus 2 cents for operating and a profit.

Now the posted service station price in Findlay is 19 cents. Mr. Wolfe's station sells at 19 cents, plus a rebate of 1 cent in the form of a coupon of that value towards premiums carried at his station. Two stations in Findlay sell at 18 cents a gallon. While the service station price is of no material difference to the station, margin being the main consideration, yet it means the jobber is 2 cents shy on every gallon sold in Findlay.

The advent of the Firestone station in August will mean a further division in the gasoline business. What brand will be sold has not been determined yet. Cooper's station sells National Refining and Standard Oil products; Goodyear's station sells Standard Oil. Both National Refining and Standard report increasing sales so far this year over last year, not considering the additional volume from the two one-stop stations. If the three one-stop stations do any volume of gasoline business the amount they sell will more than equal any natural increase and obviously have to come out of somebody's market.

What the oil industry will do in Findlay to strengthen its own market has been determined by one company. The National Refining Co. has started construction for enclosed lubrication at its station on Main street, south of the Cooper station. This is the first move of an oil company to improve its marketing outlets, with this new type station for Findlay.

Rumor has it that an oil company is considering expansion at one of its stations, in a strategic place to compete with one of the one-stop stations, with a full line of services and merchandise and leasing the location to an operator. At least one specialist in automotive services is contemplating seriously on a one-stop business.

The new one-stop stations have not added materially to the tire distribution facilities. The Chamber of Commerce reports 25 tire dealers in Findlay, and 75 establishments selling tires. To these figures the Cooper station would bring the total of establishments to 76, while the Goodyear and Firestone stations would decrease the 25 by two, since these distributors are moving into new buildings with additional lines to sell. In other words, the one-stop stations add three more gasoline outlets to only one more tire establishment.

Turning to the competition of other departments set up by the one-stop stations we find that one of the leading car washers in Findlay has not felt any decrease in business traceable to the stations. Business at Carter's washing place was reported as good until early May, then volume dropped about 25 per cent. This decrease coincides with the closing early in May of a 5,000,000 bank through frozen assets early. So far no one has lost money through the bank, but the doors are closed and the money tied up.

Carter's washing place has catered to the better car owners; to put it financially, those willing to pay $2.50 for a car wash. Several individuals reported that fairly quick service was available at Carter's about the time Cooper's station opened, but that in a short time it was necessary to make an appointment well in advance to get the car washed.

Car washing is a service that can be built, as against the fairly definite market for gasoline and tires. Use of gasoline and tires is well out of the hands of man, and in the lap of the good of weather and the desire to move about. Industry may aid consumption through advertising and education, but in the long run man's efforts are slim. Additional market outlets only divide the patronage. But with washing the business may be built. The

One-stop service station of the Cooper Tire Co., Findlay, O. The front show windows are on Main st., principal tourist thoroughfare. The departments open onto a side street

"BORN DUMB"

A STORY IN PICTURES

SHOWING

AUTHENTIC AND INTIMATE SCENES IN THE ORIGIN, BIRTH AND FINAL EPISODE IN THE LIFE OF A DROP OF

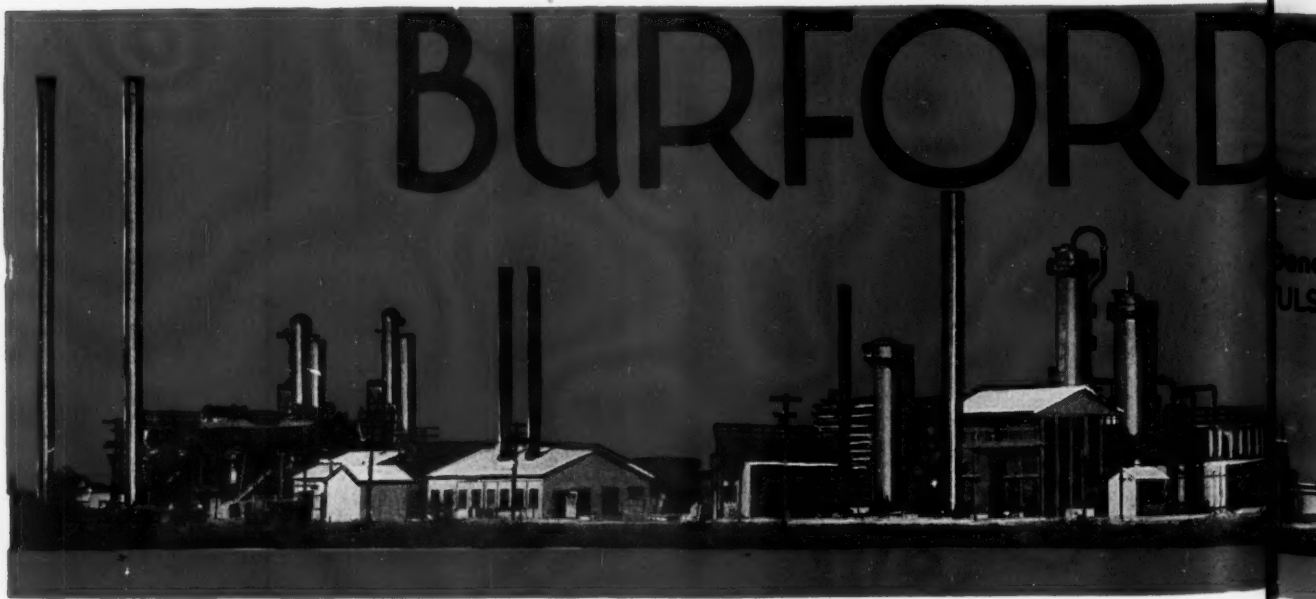
SILENCER GASOLINE

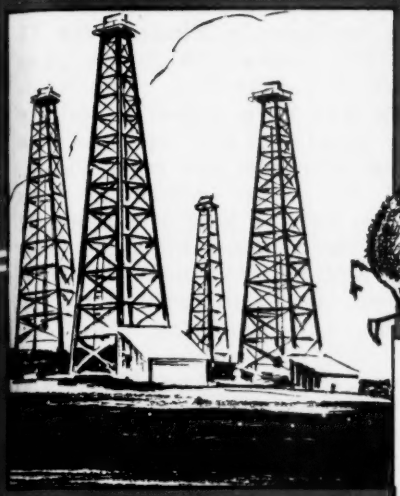
ALL THE way from the crude to the smooth running, quiet motor that uses Silencer Gasoline—every drop is brought up in an anti-knock atmosphere. On the opposite page the story of "BORN DUMB" is briefly illustrated. There can be no mistake that every drop of Silencer is absolutely DUMB when it reaches the combustion chamber. It cannot utter a sound.

Especially attractive to jobbers is this DUMB quality. It is 60-62 gravity—it is 390-400 end point—and it has the other high qualities that make Silencer an all-around superior gasoline and a steady, dependable gallonage and profit builder.

Write or wire Burford today for details of the Silencer contract.

BURFORD





ORIGIN

The Anti-Knock Specialists use exclusively one of the few natural high anti-knock crudes in the world—giving every drop of Silencer Gasoline an impressive "anti-knock" origin. Its origin goes a long way in making Silencer absolutely silent in motors.

BIRTH

Burford special anti-knock refining gives Silencer its high anti-knock rating; but Silencer is not only Born Dumb, it is also Born High-Test and with greater power and smoother motor operation that car-owners want and quickly recognize.

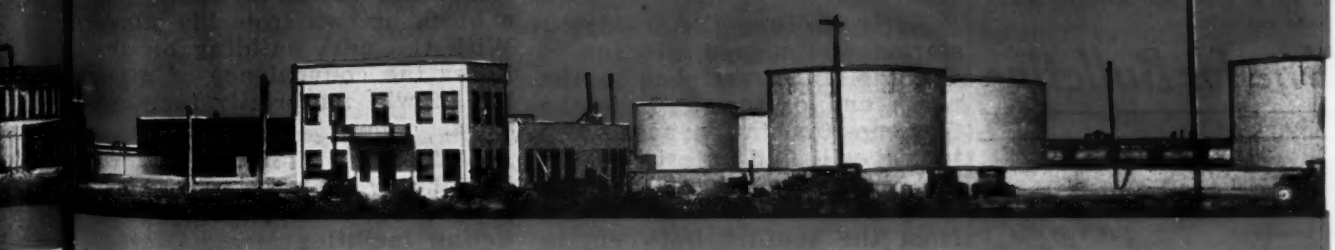
DUMB TO THE VERY END

Never a knock comes from Silencer—instead it takes the knocks out of motors. To the very end, every drop means silent power and means a steady and increasing gallonage flowing from the station pumps to satisfied "repeat" customers.

OIL COMPANY

General Sales Office,
TULSA TRUST BLDG.,
TULSA, OKLA.

Refinery, PECOS, TEXAS
Branch Sales Office, Plymouth, Bldg.,
MINNEAPOLIS, MINNESOTA



The GREATEST BULK LUBE "SALESMAN" of THEM ALL

MODEL 200

On Duty In Countless Home Garages

Model 200 is doing more than any other article of dispensing equipment to popularize bulk lube sales for industrial, agricultural, commercial and private use. Compact, sturdy, complete, it fits all drum depths and various size openings. All metal construction. So well built that it will handle kerosene, gasoline, alcohol, etc., as well as motor oils. Write for sales plans and bulletins.

Write for Bulletins

SERVICE STATION EQUIPMENT COMPANY

DIVISION OFFICES and WAREHOUSES COAST TO COAST.

FOREIGN DIVISION
32 Broadway New York City

owner who washes his car may be persuaded to patronize the rack, or the casual customer may be converted into a regular patron, thus new customers are made.

The battery department of the Cooper one-stop station has made itself felt with the business of Helms battery store, one of the leading battery places in Findlay.

The current year had all the earmarks of being good for the battery and tire man, so C. J. Helms visioned early in the season. Hard times, business slow, yes, but he figured these would be allies in helping batteries and tires. When business is good he figures many motorists invest in a new car just about the time the battery and tires began to play out, and a customer was lost. So he reasoned that with hard times the would be turned-in car would be driven another season, hence a potential customer, with the used-car buyer taking some other machine. But something went wrong some place and business has not held up to his calculations; 25 per cent of the blame goes to the new station and 75 per cent to the bank closing.

Mr. Helms also believes batteries have swung around from a repairing to a sales business. Years back when a new battery cost $40 to $50, his repair business was good. The owner was reluctant to buy a new one when a few dollars spent in repairs saved many an other dollar. Now he finds the repair business has narrowed down to adding water, recharging, and a little repair work on the posts. With the low present day price of new batteries he finds the repairing business on the wane.

Turning to tires we find the two main distributors in Findlay are going into the one-stop business and expanding their lines. The first to go was A. Dantico, the Goodyear distributor.

Early in June the Goodyear station was opened. It, too, is along Main street, but in the north end of town. It is the first one-stop station, so far, the tourist will find entering Findley from the north. The Cooper station is the first entering from the south. Between, in the business district, the Firestone station is being built.

Mr. Dantico has been in the tire business in Findlay for 15 years. Since 1922 he has handled Goodyears. The business was in a store owned by Mr. Dantico, and he was the sales manager, tire repair man, and all. The overhead was small, but he was a consistent advertiser. Now he has a station selling gasoline, oil, lubrication, tires and repairing, batteries and repairing, and car washing; he does not have brake service. And there are three employes, so Mr. Dantico is having his first venture as an employer on a large scale.

Business, in the first two weeks, was reported by Mr. Dantico as good. On the opening day he sold 1,000 gallons of gasoline, when the Goodyear blimp and cigars and flowers attracted a crowd.

The third one-stop station is that of Firestone's, to be operated by J. K. Haddad, the present distributor. Mr. Haddad sells tires, batteries, bicycles and motorcycles in a regular store room now. The bicycles and motorcycles will be dropped when the new station is opened in August.

Four employes will help Mr. Haddad run the place. The tire man is experienced in battery work, and will be in charge of both departments. There will be a man on brakes; one on lubrication, washing and polishing; and a bookkeeper.

How much business he can do with a new building Mr. Haddad does not know. But he said that he recognized the present one-stop type of building as the coming store for tire sales.

Tire sales will be doubled, and possibly tripled, he thinks. This increase will come through making the tire store more accessible. At the present time his customers have to hunt a parking space on the street, sometimes finding a vacant stall a block or two from his store. With the next building he believes the convenience of driving in will materially increase sales.

And so the oil industry goes in Findlay. Forty years ago, production. Today, many marketing facilities.

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Handling Truck Costs on the Basis Of Actual Expense by Groups

By Charles Gillespie*

IN THE various branches of oil activities the operation of trucks and cars play an important part.

In the transportation department they are paramount in the pipeline, production, gasoline and marketing departments they are a means to an end, yet they are a big factor in the operations of these departments.

In fact there is no branch of the oil industry that the expense of operating and maintaining cars and trucks does not enter into in a more or less degree.

If for no other reason than that they are a definite contributing factor to the operating cost figures of these various departments, it is important that they should be handled in a manner to record correctly the expense of this activity.

Yet it is impossible to set up a cost that will correctly represent some of these items of expense, such as depreciation. This is based on the useful life of the car or truck and nobody can positively state that the unit will last four years or six, or that it will run 60,000 or 100,000 miles. That depends on a number of undetermined items such as care, roads, weather and many other causes. Also how many miles before an overhaul is necessary, how much will be spent in this overhaul and how long will the overhaul last. This same uncertainty exists in all operating and maintenance costs.

It is obvious that the various items of expense can not be charged against a job as incurred. Otherwise a department or job might get many thousands of miles of transportation for the actual running costs and the next job catch a new set of tires or an overhaul with the cost out of all proportion to the service rendered.

In order to get around this, and establish a cost, it is necessary to develop an "anticipated cost" which will include depreciation (considering salvage), insurance, license, repairs, storage, tires, gasoline, and oil and all sundry operating and maintenance charges, and in some cases drivers' wages and expenses and interest on investment.

Then anticipate the mileage this unit will run before being retired from service, divide the mileage into the cost to arrive at a cost per mile, or if you have a leaning to the small fractions, a cost per ton per mile, or cost per gallon per mile, will satisfy the most statistically inclined. This of course would have to anticipate tonnage or gallonage handled.

The difficulty of accumulating this on each truck and car is apparent. However, by grouping trucks and cars by make and tonnage and recording the actual expense for a period of time an "experience record" can be obtained for each group and can be used as a basis of charging this expense currently.

To handle this method it is necessary that two separate accounts be utilized, an operating account, and an earning account.

To the operating account charge all operating and maintenance costs, this account to be supported by a detail record, segregating by car or truck number the various classes of charges such as repairs, tires, batteries, storage, gasoline, oil, greasing, insurance and licenses depreciation and miscellaneous.

The "earning account" is to be credited with the adopted cost per mile, based on mileage as supplied by the operator. This operator's report to also show "on what work engaged" so that distribution—on the mileage rate—can be made against various jobs.

The difference between the operating account and the earnings account will represent the error in rate. If a correct rate is used this variation should be small. If depreciation is applied monthly the variation can be kept in line by adjusting the

*Accountant, Phillips Petroleum Co., Bartlesville, Okla.

Second Marketing Accounting Article

THE second article on marketing accounting by Charles Gillespie is on a method of distributing truck and car operating costs.

Three other articles are being prepared by Mr. Gillespie for the marketing executive as well as the accountant on marketing problems. Subjects for future articles are method of pricing products, the handling of state gasoline tax, and station auditing.

The first article, on a method of handling coupon books redeemed, was published in the July 23 issue, page 97.

Did *You* Borrow It?

HOW often have you heard the Boss say: "Who's got my copy of National Petroleum News?" And then you wish you hadn't borrowed it again!

You can have your own copy regularly each week for only $3.50—52 issues. This low price permits every man in the oil industry who wants to study its development and become a better oil man, to have his own copy—at the office or home—to study and think over.

Knowledge and ideas are making profits for all today. And it's *knowledge of the oil industry itself* that is necessary to get profit (or salary increase) from that business.

NATIONAL PETROLEUM NEWS' contribution to your knowledge at the low rate of $3.50 for 52 issues is made possible by its big volume of business. This big volume permits us to furnish you a staff of expert oil writers located at important oil centers, correspondents in outlying fields, and the writings of technical and scientific men on production, refining, natural gasoline and marketing.

So if you did borrow this issue or can use another for your own study at home—avail yourself of this universal rate TODAY!

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Send the next 52 issues of National Petroleum News to me at the address given below. Enclosed is check (draft or money order) for $3.50. (Foreign $5.00.)

NAME.....

Street or Box..... Branch engaged in.....

City-State..... Company.....

rate in accordance with the experience.

It is customary in nearly all companies that the marketing accounting is independent of the general accounting of the other departments in the same company and for reasons peculiar to their type of activity, their problems may require different handling.

In the case of truck operations, the driver is generally considered as a salesman, particularly in rural communities, and is hired with that idea rather than for his mechanical knowledge of truck operation.

The class of deliveries in the marketing department is not similar to hauling in other branches of the industry. Marketing trucks are regularly washed and greased, they travel for the most part over good roads, an overload is the exception rather than the rule, the truck is properly housed each night and can receive attention as soon as a defect develops. Therefore all things considered, the operating costs of marketing trucks is not comparable with that of other departments.

As the special conditions under which this equipment operates has a big bearing on the rate, it is not possible to set a basis that will fit all companies. This must be established from their own experience, yet the following rates can be used as a starting point for marketing units predicted on present prices of equipment, tires, etc., and not including drivers' wages or expenses.

4 cylinder cars	4½c per mile
6 cylinder cars	6c per mile
1 ton truck	7c per mile
1½ to 2 ton truck	11c per mile
3 ton trucks	13c per mile
4 or 5 ton trucks	18c per mile

Adjustment of these rates can be made from time to time as the individual company's experience dictates.

This method of handling will be found of real benefit in companies that break up their marketing expense by stations, as the unit of operation (the station) is so small that a repair job or a pair of new tires purchased for a truck in one month will distort the operating cost of that station out of all practical use for comparative purposes. It will also get away from that complication where a truck after many months of work at a station is transferred to another station possibly just before a large repair job is necessary. Also assist in comparison of station expense whether new trucks or old are being used.

One drawback to this method is that where the actual cost of truck or car would be closely scrutinized, were it charged direct against a station's monthly operating costs, it will now be included in an account where it might be overlooked unless care is taken to have the proper supervision over this item of expense also.

2 Indicted in Service Station Permit Case

NEW YORK, July 24.—Charles W. Jannicky, until a few weeks ago deputy fire commissioner of New York, has been indicted with Israel Miller on a charge of conspiracy to obstruct justice in connection with the issuance of a permit for the building of a service station.

Miller sought the permit for a station on property zoned against gasoline stations. Jannicky conspired, it is charged, to have city records altered to evade the restriction.

Jannicky is the Tammany leader in an assembly district in Brooklyn.

"Servicenter" is New Name For Grease Pits

NEW YORK, July 24.—No longer will covered lubrication pits of the Standard of New Jersey carry the sign "Standard Lubrication Service." It is being changed to "Servicenter."

Several stations have pits with this sign and the company is equipping others rapidly. The letters are red against a white background.

To assist in selections of cities for these "Servicenters" and in design of new service stations, G. L. Rosebrook, San Francisco, has joined the company. Mr. Rosebrook was a practicing architect in California.

Cylindrical Tanks
Welded or Riveted

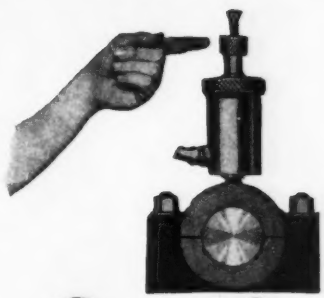
We are equipped to fill your cylindrical tank requirements quickly and economically from our Birmingham, Ala., and Bridgeburg, Ont. plants. These tanks are furnished in standard and special designs, welded or riveted.

You can also save money and time on field erected tanks, 500 bbls. and up, equipped with cone roofs or Wiggins Roofs for stopping fire and evaporation. Quotations gladly furnished.

Chicago Bridge & Iron Works

Cleveland.....2206 Union Trust Bldg.
New York....3145 Hudson Terminal Bldg.
Philadelphia.....1614 Jefferson Bldg.
Boston.....1516 Consolidated Gas Bldg.
Chicago.....2125 Old Colony Bldg.
Detroit.....1513 Lafayette Bldg.
Birmingham.....1534 Fiftieth St., N.
Dallas.....3339 Magnolia Bldg.
Atlanta.....2150 Rhodes-Haverty Bldg.
San Francisco.....1060 Rialto Bldg.
Houston.....1118 Electric Bldg.
Havana, Cuba.....Apartado 2507

OPPORTUNITY



GUN-FIL

TRADE MARK REG. U.S. PAT. OFF. AND ELSEWHERE

A few sales territories are open. We offer real proposition for oil salesmen and oil jobbers, who can produce, to sell GUN-FIL Lubricators to Automotive trade; —for cars, trucks, busses, tractors and airplanes.

Big Market.....Good Profits
Repeat Orders.....Sales Helps

Write today. Advise territory covered, class of trade called on, and products handled.

This ad. will not be repeated.

ACT AT ONCE

Manufactured under U. S. Patents dated January 1, 1924, June 2, 1925, and U. S. & Foreign Pats. Pending

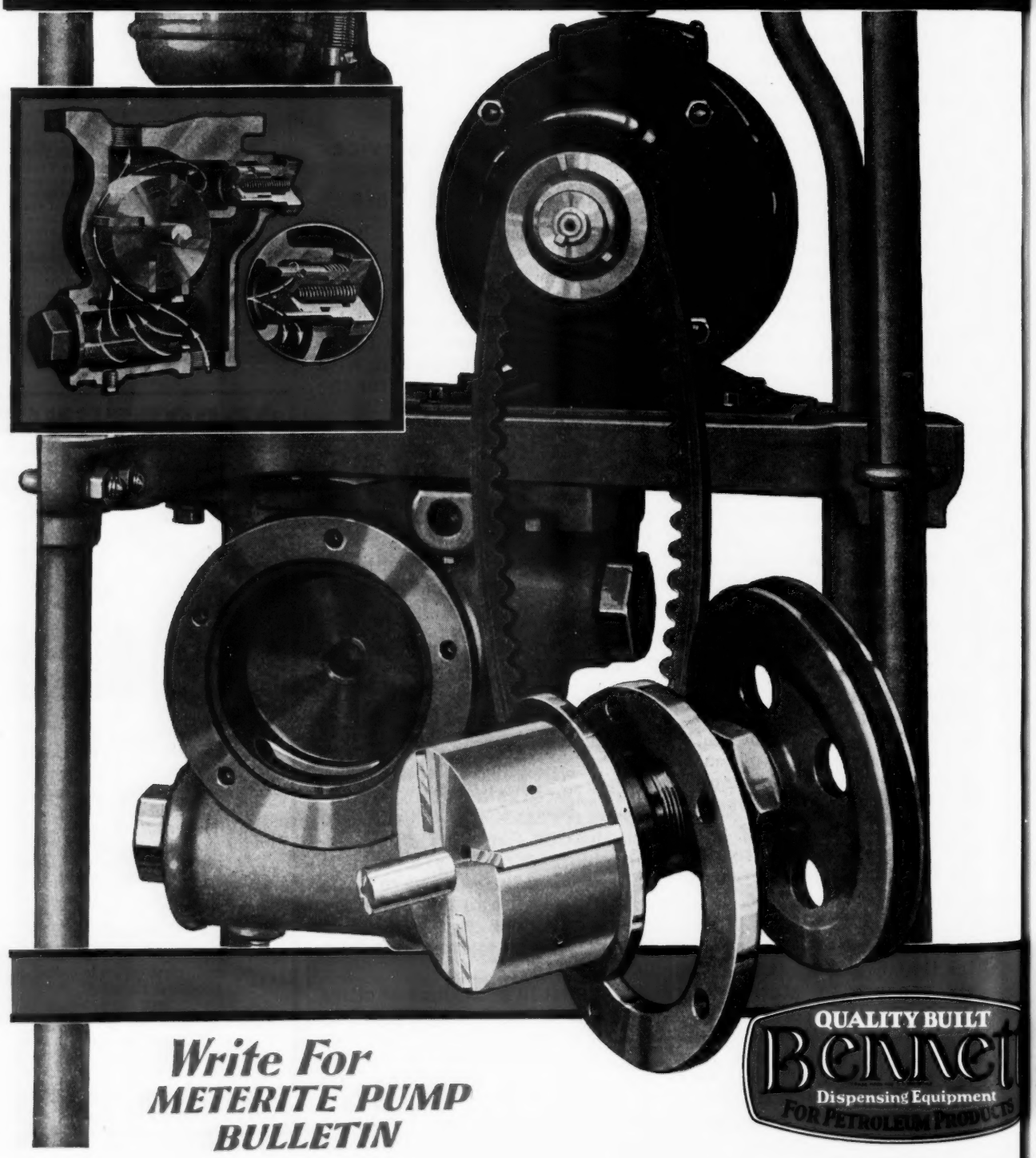
By

GUN-FIL CORPORATION

112 S. 16th Street, Philadelphia, Pa., U.S.A.

Again the Industry

The NEW Bennett Metering
NATIONAL



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BULLETIN

QUALITY BUILT
BENNETT
Dispensing Equipment
FOR PETROLEUM PRODUCTS

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Crude Production by Fields

By Telegraph—Daily average gross output, by fields in U. S., for week ending with dates below as compiled by A. P. I.

PRODUCTION SUMMARY

	July 26	July 19
Production east of Rockies	1,877,800	1,885,200
Decrease		7,400
Total production in U. S.	2,488,700	2,500,100
Decrease		11,400
Crude oil imports	188,285	172,715
Increase		15,570
Total new crude supply	2,676,985	2,672,815
Increase		4,170

OKLAHOMA

	July 26	July 19
Allen Dome	16,700	18,200
Asher	1,050	1,600
Asher, West	4,000	3,000
Blackwell	3,200	3,500
Bowlegs	17,400	20,150
Braman	3,400	3,350
Bristow-Slick	15,450	15,250
Burbank	16,000	16,000
Carr City	5,050	7,550
Cromwell	7,500	7,500
Cushing	13,450	13,300
Davenport	1,200	1,200
Duncan Dist.	9,300	9,300
Earlsboro	26,300	28,400
East Earlsboro	15,200	19,850
Earlsboro, So.	9,600	13,000
Fox	1,200	1,150
Garber	4,350	4,400
Graham	3,400	3,400
Healdton	12,100	12,100
Hewitt	7,200	7,250
Hubbard	1,500	1,500
Konawa	23,350	23,850
Little River	30,100	30,850
Little River, East	10,050	13,750
Logan Co.	4,800	4,000
Maud	4,200	4,700
Mission	9,200	8,650
No. Okmulgee	10,450	10,800
Oklahoma City	77,450	74,150
Osage (Ouside Burbank)	25,900	25,750
Papoose	2,750	2,700
Pearson	800	800
Sasakwa	6,100	7,300
St. Louis	26,450	28,700
Scholem-Alechem	15,100	15,000
Searight	9,350	9,650
Seminole	18,800	19,050
Seminole, East	2,500	2,800
So. Okmulgee	7,200	7,300
Thomas	650	650
Tonkawa	8,000	7,200
Wewoka	3,550	3,600
Yale - Jennings	7,950	7,950
Others	67,600	66,650
Total, Oklahoma	566,850	586,300
Decrease		19,450

KANSAS

Augusta-Fox Bush	2,750	2,800
Churchill	3,800	3,900
Eldorado-Towanda	14,000	14,000
Florence-Covert	800	750
Greenwood Co.	19,000	19,550
Oxford	2,750	2,800
Peabody-Elbing	2,700	2,950
Rainbow Bend	1,100	1,100
Russell	3,500	3,500
Sedgwick Co.	17,950	18,200
Voshell	10,700	8,250
Others	38,000	38,500
Total, Kansas	117,050	116,300
Increase		750

NORTH LOUISIANA

Caddo, light	9,700	9,600
Caddo, heavy	2,900	2,200
Cotton Valley	2,050	2,050
De Soto and Red River	3,100	3,100
Haynesville	4,800	4,800
Holly	1,250	1,450
Homer	3,500	3,500
Sarepta		
Carterville	2,950	2,900
Urania	5,250	5,250
Zwolle	5,000	2,850
Others	1,650	1,700
Total, No. Louisiana	42,150	39,400
Increase		2,750

ARKANSAS

Champagnolle	4,400	4,400
El Dorado	4,200	4,200
Lisbon	950	950
Nevada	1,000	1,000
Smackover, light	5,150	5,150
Smackover, heavy	37,550	37,600
Stephens	950	950
Others	1,250	1,250
Total, Arkansas	55,450	55,500
Decrease		50

ROCKY MOUNTAIN

Wyoming

Big Muddy	2,050	2,050
Elk Basin	900	850
Grass Creek	2,050	2,200
Labarge	1,850	2,200
Lance Creek	150	150
Lost Soldier	950	950
Oregon Basin	2,850	2,850
Rock River	2,100	2,200
Salt Creek	30,000	27,100
Others	5,200	5,150
Total, Wyoming	48,100	45,700
Increase		2,400

Montana

Cat Creek	1,150	1,150
Pondera	2,200	2,300
Sunburst	5,950	5,950
Others	50	50
Total, Montana	9,350	9,450
Decrease		100

Colorado

Florence	550	550
Fort Collins	1,350	1,300
Moffat (Craig)	1,200	1,150
Others	1,600	1,600
Total, Colorado	4,700	4,600
Increase		100

New Mexico

Artesia	700	700
Hobbs High	32,900	
Balance Lea Counties	6,500	38,500
Hogback	500	450
Rattlesnake	1,400	1,400
Table Mesa	100	100
Others	100	1,050
Total, New Mexico	42,200	42,200
Total, Rocky Mountain	104,350	101,950
Increase		2,400

TEXAS

(Outside Gulf Coast)

Panhandle District

	July 26	July 19
Carson County	8,900	8,900
Gray County	65,000	70,350
Hutchinson County	21,500	21,200
Wheeler County	600	900
Others	400	400
Total, Panhandle Texas	96,400	101,750
Decrease		5,350

North Texas

Archer County	16,250	16,200
Burkburnett	6,300	6,300
Electra	12,500	12,500
Iowa Park and K. M. A.	5,700	5,700
Montague-Cooke	9,800	9,700
Wilbarger	22,250	22,350
Others	1,750	1,700
Total, North Texas	74,550	74,450
Increase		100

West Central Texas

Brown County	6,400	6,450
Callahan County	3,650	3,700
Coleman County	3,550	3,600
Eastland-Desdemona	5,650	5,700
Jack County	2,200	2,150
Palo Pinto County	550	550
Shackleford County	7,050	7,100
Stephens County	5,550	5,550
Throckmorton County	950	1,000
Young County	18,850	18,900
Others	1,000	1,000
Total, West Central Texas	55,400	55,700
Decrease		300

West Texas

Crane and Upton Counties	39,400	40,500
Crockett County	2,150	2,250
Ector County	18,050	19,800
Howard County	29,300	29,300
Jones County	1,250	1,300
Mitchell and Scurry Counties	2,200	2,200
Reagan County	21,450	19,000
Winkler County	73,200	69,200
Yates	102,500	102,100
Balance Pecos County	3,850	4,000
Others	4,300	4,300
Total, West Texas	298,650	293,950
Increase		4,700

East Central Texas

Boggy Creek	2,900	3,400
Corsicana-Powell	5,800	5,800
Currie	350	350
Mexia	4,500	4,450
Nigger Creek	200	200
Richland	250	250
Van Zandt	26,000	24,000
Wortham	900	900
Total, East Central Texas	40,900	39,350
Increase		1,550

Southwest Texas

Dale	300	300
Darst Creek	31,500	26,500
Laredo District	12,200	11,700
Luling	9,900	9,800
Lytton Springs	850	850
Salt Flat	20,300	20,900
Somerset	1,600	1,650
Others	700	700
Total, Southwest Texas	77,350	72,400
Increase		4,950
Total, Texas (Outside Gulf Coast)	643,250	637,600
Increase		5,650

GULF COAST

Coastal Texas

	July 26	July 19
Barbers Hill	20,500	18,850
Batson	1,200	1,200
Big Creek	4,100	4,300
Blue Ridge	1,600	1,650
Boling	1,150	1,100
Damon Mound	700	700
Esperson	2,400	2,500
Fannett	800	750
Goose Creek	4,700	4,700
Hankamar	2,300	2,350
Hull	9,200	8,200
Humble	19,900	18,050
North Dayton	1,350	1,700
Orchard	2,800	2,400
Orange County	2,150	2,200
Pettus	5,900	5,050
Pierce Junction	11,150	11,400
Port Neches	1,950	1,850
Raccoon Bend	12,000	11,850
Refugio County	34,300	36,250
Saratoga	1,000	1,000
Somerville	1,450	1,500
Sour Lake	2,200	2,200
South Liberty	3,900	3,900
Spindletop	17,100	18,000
Sugarland	12,100	12,000
West Columbia	5,600	5,450
Others	2,400	2,400
Total, Coastal Texas	185,900	183,500
Increase		2,400

COASTAL LOUISIANA

East Hackberry	1,750	2,200
Old Hackberry	1,100	1,100
Edgerly	550	550
Evangeline	2,150	2,450
Lake Barre	1,500	1,600
Lockport	3,100	3,450
Port Barre	4,400	3,600
Sulphur Dome	4,000	3,500
Vinton	4,700	4,450
Others	3,200	2,900
Total, Coastal Louisiana	26,450	25,800
Increase		650
Total, Gulf Coast	212,350	209,300
Increase		3,050

CALIFORNIA

Dominguez	10,000	10,000
Elwood-Goleta	45,700	46,500
Huntington Beach	28,000	28,000
Inglewood	17,200	17,400
Kettleman Hills	13,500	13,700
Long Beach	101,000	100,000
Midway-Sunset	63,000	63,500
Santa Fe Springs	110,500	112,000
Seal Beach	21,000	21,300
Ventura Avenue	48,000	50,500
Others	153,000	152,000
Total, California	610,900	614,900
Decrease		4,000

EASTERN

(Not including Michigan)	126,500	129,000
Decrease		2,500

MICHIGAN

Mt. Pleasant	6,850	6,750
Muskegon	2,750	2,850
Saginaw	250	250
Total, Michigan	9,850	9,850

Compilation Of Mid-Continent Refinery Operations

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Mid-Continent Refinery Operations, Week Ended July 25 (By Telegraph)

	Kansas	Oklahoma	North & Cent. Texas	West Texas	North La.-Ark.	Total Week Ended July 25
Plants Reporting....	12	29	25	15	12	93
Da. Av. Cap. (Bbls.)..	94,500	161,700	106,100	82,000	77,000	521,300
Da. Cracking Capacity	30,700	52,600	17,200	5,000	22,700	128,300
Da. Av. Crude Runs..	62,150 + 3.8	107,886 — 0.3	71,705 + 4.4	46,674 + 22.4	43,816 — 1.3	332,231 + 4.1
Da. Av. Other Oils...	9,136 + 4.8	6,288 + 23.6	2,721 +269.7	3,254 + 10.3	21,575 + 23.3	42,974 + 22.8
GASOLINE—Gallons						
Stocks, July 18.....	22,506,000	63,428,000	22,578,000	11,673,000	14,533,000	134,718,000
Prod. 7-18 to 7-25....	11,303,000 + 7.0	18,397,000 — 1.1	10,213,000 — 1.9	5,284,000 + 18.4	6,554,000 + 9.9	51,751,000 + 3.5
Ship. 7-18 to 7-25....	12,956,000 — 0.9	20,802,000 — 3.7	9,326,000 — 5.7	3,968,000 — 24.0	6,271,000 + 5.8	53,323,000 — 4.3
Stocks, July 25.....	20,853,000 — 7.3	61,023,000 — 3.8	23,465,000 + 3.9	12,989,000 + 11.3	14,816,000 + 1.9	133,146,000 — 1.2
Ratio Sales to Prod...	114.6%	113.1%	91.3%	75.1%	95.7%	103.0%
KEROSENE—Gallons						
Stocks, July 18.....	9,147,000	11,666,000	2,446,000	22,000	1,288,000	24,569,000
Prod. 7-18 to 7-25....	1,771,000 — 5.1	2,786,000 + 11.5	1,374,000 — 8.2	7,000	473,000 — 8.7	6,411,000 + 0.5
Ship. 7-18 to 7-25....	1,768,000 — 29.8	5,766,000 +150.6	1,195,000 — 27.4	25,000	336,000 — 36.4	9,090,000 + 30.0
Stocks, July 25.....	9,150,000 + 0.03	8,686,000 — 25.5	2,625,000 + 7.3	4,000 81.8	1,425,000 + 10.6	21,890,000 — 10.9
Ratio Sales to Prod...	99.8%	206.9%	87.0%	357.1%	71.0%	141.8%
STOVE DISTILLATE—Gallons						
Stocks, July 18.....	4,421,000	2,992,000	396,000	165,000	734,000	8,708,000
Prod. 7-18 to 7-25....	488,000 + 44.8	748,000 + 51.4	247,000 + 27.9	133,000 — 13.1	.....	1,616,000 + 34.2
Ship. 7-18 to 7-25....	315,000 + 32.4	134,000 — 77.3	119,000 — 30.4	91,000 — 36.8	.....	659,000 — 43.7
Stocks, July 25.....	4,594,000 + 3.9	3,606,000 + 20.5	524,000 + 32.3	207,000 + 25.5	734,000	9,665,000 + 11.0
Ratio Sales to Prod...	64.5%	17.9%	48.2%	68.4%	.....	40.8%
GAS OIL—Gallons						
Stocks, July 18.....	6,173,000	45,547,000	4,198,000	4,874,000	5,481,000	66,273,000
Prod. 7-18 to 7-25....	1,242,000 + 37.2	1,063,000 + 7.0	562,000 + 31.0	67,000 — 4.2	2,739,000 + 10.1	5,673,000 + 2.9
Ship. 7-18 to 7-25....	1,172,000 + 37.7	1,846,000 + 40.3	501,000 + 50.4	1,142,000 +161.3	3,225,000 + 6.2	7,886,000 + 32.0
Stocks, July 25.....	6,243,000 + 1.1	44,764,000 — 1.7	4,259,000 + 1.5	3,799,000 — 22.1	4,995,000 — 8.9	64,060,000 — 3.3
Ratio Sales to Prod...	94.4%	173.7%	89.1%	170.4%	117.7%	139.0%
FUEL OIL—Gallons						
Stocks, July 18.....	29,851,000	49,871,000	74,639,000	18,051,000	24,967,000	197,379,000
Prod. 7-18 to 7-25....	4,907,000 — 6.3	6,243,000 + 8.6	8,389,000 + 2.2	6,977,000 + 42.0	5,408,000 + 8.7	31,924,000 + 9.8
Ship. 7-18 to 7-25....	3,384,000 + 85.3	7,991,000 + 19.3	9,804,000 + 7.9	1,643,000 — 82.7	6,082,000 + 18.5	28,904,000 —10.4
Stocks, July 25.....	31,374,000 + 5.1	48,123,000 — 3.5	73,224,000 — 1.9	23,385,000 + 29.5	24,293,000 — 2.7	200,399,000 + 1.5
Ratio Sales to Prod...	69.0%	128.0%	116.9%	23.5%	112.5%	90.5%

Gasoline Produced by Various Methods, Week Ended July 25

	Kansas	% of Total	Oklahoma	% of Total	North & Cent. Texas	% of Total	West Texas	% of Total	Louisiana-Arkansas	% of Total	Total	% of Total
Straight Run	6,705,000	59.3	11,643,000	63.3	6,614,000	64.8	4,907,000	92.9	2,023,000	30.9	31,892,000	61.6
Cracked.....	4,031,000	35.7	5,139,000	27.9	2,798,000	27.4	227,000	4.3	3,368,000	51.4	15,563,000	30.1
Natural.....	567,000	5.0	1,615,000	8.8	801,000	7.8	150,000	2.8	1,163,000	17.7	4,296,000	8.3
Total.....	11,303,000		18,397,000		10,213,000		5,284,000		6,554,000		51,751,000	

+ or — columns are % changed over previous week.

Gasoline Stocks Fall Though Demand Slips

Staff Special—By Telegraph

TULSA, July 29

GASOLINE stocks at Mid-Continent refineries that report their operating statistics weekly to National Petroleum News, drew 1,500,000 gallons of gasoline from storage in the week ended July 25. Lowering of stocks was wholly in the Oklahoma and Kansas districts.

Refiners charged an average of 13,000 barrels more crude to stills daily than in the preceding week. This increased gasoline production 1,700,000 gallons. Demand was 2,400,000 gallons less.

Stocks of motor fuel July 25 were 133,146,000 gallons, or 5,300,000 gallons more than a year before.

Kerosene production increased a trifle; shipments were larger, and stocks were reduced 2,600,000 gallons.

Other stocks changes were: distil-

Summary for the Month

Production and shipments, all reporting refineries, for four weeks ended July 25. Change in stocks figures from June 27.

GASOLINE

	Gallons
Production	200,883,000
Shipments	221,671,000
Net change in stocks	—20,788,000
Ratio sales to production	110.3%

KEROSENE

Production	24,540,000
Shipments	29,163,000
Net change in stocks	—4,623,000
Ratio sales to production	118.8%

STOVE DISTILLATE

Production	5,324,000
Shipments	4,081,000
Net change in stocks	+1,243,000
Ratio sales to production	76.7%

GAS OIL

Production	25,563,000
Shipments	25,325,000
Net change in stocks	+238,000
Ratio sales to production	99.1%

FUEL OIL

Production	118,438,000
Shipments	113,585,000
Net change in stocks	+4,853,000
Ratio sales to production	95.9%

late increased 900,000 gallons; gas oil decreased 2,200,000 gallons; fuel oil increased 3,000,000 gallons.

Excess Water Used

(*Continued from Page 82*)

removal costs, and (c), slagging of boiler tubes of high ratings.

The disadvantages of coke compared with coal are (1) occasional high water content, (2) occasional excess oil content, (3) presence of wire, (4) occasional low volatile matter content, and (5) low fusing temperature of the ash. In our experience the petroleum coke ash fuses at about 2000 F.

Apparently the boiler heat balance obtained with coke is about the same as that obtained with coal. The experience to date at the Lincoln Beerbower station is necessarily too limited to make any broad statements regarding petroleum coke fuel that would be applicable to all stations and to all petroleum coke.

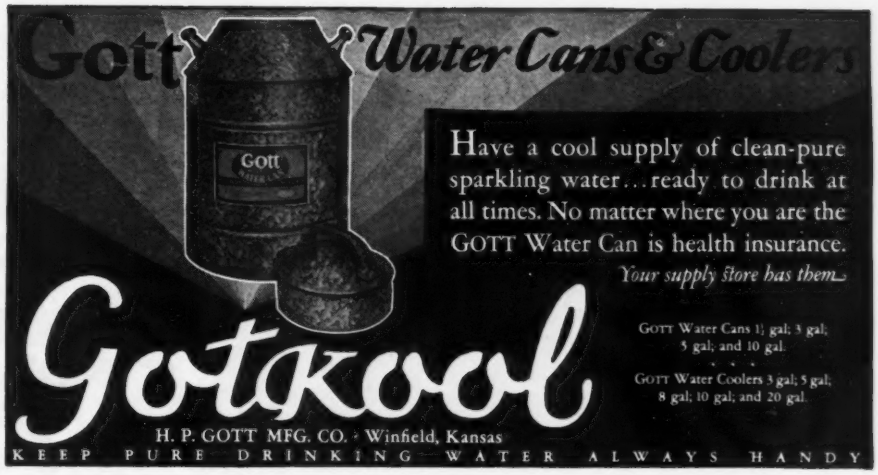
It is certain, however, that if refiners could maintain the moisture content, volatile matter content, and tramp wire within more desirable limits, the petroleum coke would be a more desirable fuel than it is at present and that such action on the part of the refiners would probably induce a wider use of the coke as boiler fuel. Our experience indicates that a moisture content of not over 5 per cent and a volatile matter content of between 14 per cent and 20 per cent would be satisfactory.

This discussion has been confined to petroleum coke and has neglected details of station design and operation. We have rather stressed the difficulties encountered in the commercial use of petroleum coke as a fuel in order that those responsible for the production of this by-product may become familiar with factors that tend to retard the use of coke as fuel and, if possible, aid producers in reducing or eliminating some of the objections.

New Gear Compound Made By S. O. New Jersey

NEW YORK, July 19.—The Standard Oil Co., of New Jersey, through its dealers, soon will sell a new lubricant called "Standard Leaded Compound." This product was developed in the laboratories of the Standard Oil Development Co.

This lubricant was made for use in passenger cars and trucks with hypoid and herringbone gears. At first only "No. 6" consistency will be marketed. It is for use in temperatures above 45 degrees Fahrenheit. Later it is probable an oil will be marketed for colder temperatures.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Refinery - Tank Wagon Markets

Contract Gasoline Is Moving Well; Spot Buying Still Drags

CLEVELAND, July 28

CONTRACT movement of gasoline continued at a good rate in most refinery markets the week ended July 26. Spot buying was relatively light. Gasoline prices fluctuated, minor advances reported in some markets and fractional declines in others.

Elimination of distress gasoline in the Mid-Continent imparted a more optimistic tone to the Mid-Continent and Chicago markets, although the low price of the range for U. S. Motor gasoline at Chicago slipped 0.125 cent. In the Mid-Continent refiners were able to raise their minimum prices from 5.625 and 5.75 cents to 6 cents. High prices of the ranges were steady.

New York district refiners also advanced their low quotations but at the southern end of the Atlantic coast markets prices receded a little from the preceding week. Prices were steady in the Mid-Atlantic markets.

On the Gulf coast the upper limit of the U. S. Motor price range was lowered 0.25 cent to meet competition originating on the Atlantic coast.

Although export inquiries cast a brighter light on California gasoline markets refiners feared the reported shading of prices on shipments by tank truck. Tank truck deliveries at shaded prices have also been reported on Long Island and in the Bronx in the New York metropolitan area in spite of higher prices at New York harbor refineries.

No buying was uncovered as a result of export inquiries in California and exporters seemed uninterested in the Gulf market at present prices.

Inquiries for August deliveries of gasoline have been increasing but competition is keen for available business. Current market prices have been quoted in New York over the first 10 days of August. In Chicago competition for August gallonage threatens to hold down prices although gasoline stocks are being lowered steadily.

There is a steady but small demand for kerosene. Prices have receded a trifle in most markets, except for the higher gravity goods.

Middle western jobbers have begun to stock distillates for winter heating demands but are buying mostly the low cold test grades.

Gas oil demand has been maintained with price improvement.

Advance of 5 cents a barrel in price of bunker C fuel oil at Baton Rouge was the most encouraging factor of the week in the fuel oil market. In the Mid-Continent fuel oil is quiet, except for 28-30. Fuel prices have fallen in California, except for bunker oil at San Pedro.

The Pennsylvania bright stock market reports improved demand and firmer quotations. Neutrals in this market are steady. Mid-Continent bright stocks and neutrals are also steady.

Interest in paraffin waxes has subsided in the New York market but bids under recent selling prices are reported to have received no takers. Several Pennsylvania refiners report being sold up for several months.

Spot Market Trading Light in Chicago

CHICAGO, July 26

SPOT demand for practically all commodities continued relatively light in the Chicago market the week ended July 26. Activity in gasolines was confined pretty much to contract business. The closing of several important burning oil contracts for next season featured this part of the refined oil list.

Despite the fact that events of the week pertaining to gasoline were favorable, gasoline prices receded 0.125 cent on the low ends of ranges in the Chicago market.

The fall in crude production, curtailment of refinery operations, and reduction in gasoline stocks failed to have any favorable effect on general market prices for gasoline. What the trade considered more important, however, was the elimination of a good bit of the distress gasoline that has been hanging over the market since the middle of the month. At no time has it been sufficient to influence general market prices to any great extent, but nevertheless it has tended to depress the situation.

During the early days of the week, U. S. Motor gasoline was offered in fairly large volume at 5.875 cents a gallon. Occasional cars of strictly specification gasoline were reported sold at 5.75 cents. Slightly off specification material sold as low as 5.625 cents, but 5.875 cents was the low for the general market.

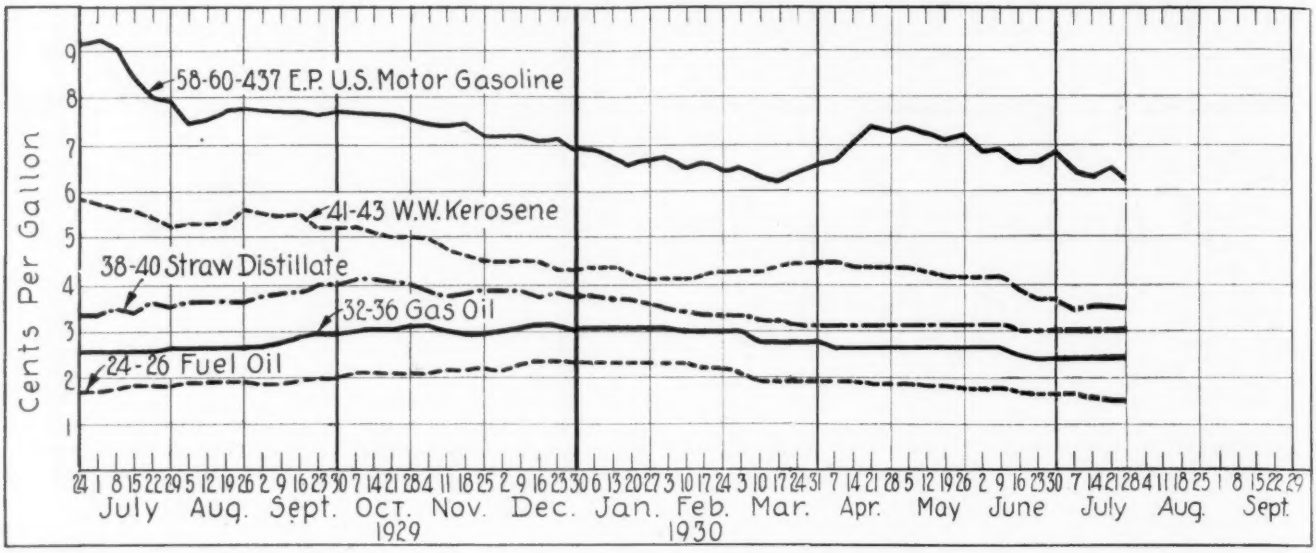
Gasoline was offered at the foregoing prices for shipment from nearly all districts of the Mid-Continent as well as central states refineries. Quotations in the Chicago market for Motor ran as high as 6.50 cents but 6.25 cents was the maximum at which any appreciable volume of material was reported sold.

The differential territory market was somewhat unsettled. Competition for August business was exceptionally keen, and already it had affected spot market prices adversely, several traders reported.

Early in the week U. S. Motor was quoted from 8.50 cents up, delivered in Detroit, or at 0.25 cent under the previous low. Late in the week a few sellers were offering to shade 8.50 cents.

Inquiries for August gasoline have

Current Prices of Principal Mid-Continent Refined Products


58-60-437 E.P. U.S. Motor Gasoline
41-43 W.W. Kerosene
38-40 Straw Distillate
32-36 Gas Oil
24-26 Fuel Oil
Cents Per Gallon
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1929
1930

Prices shown are in Group 3 basis and extended to date shown in Refinery Market Tables Section of this issue

been coming in at an exceptionally good rate, several sellers reported. In the last two or three months jobbers have bought little material for deferred shipment. The fact that they were willing to cover this early on their August requirements lent somewhat of an optimistic tone to the future market.

A further slight improvement was noted in the demand for kerosene although prices for 41-43 water white receded slightly. Sales of this grade at 3.25 cents were more numerous against the previous minimum of 3.375 cents. The 42-44 grade remained unchanged at 3.875 to 4.25 cents.

Spot market trading of the heavier burning oils continued low. Negotiations of several large contracts for next winter were completed late in the week. Details of the transactions were withheld, although it was stated that published prices would be the basis for determining prices.

One or two shower periods are likely next week in the Standard of Indiana territory, according to the Chicago weather bureau. Temperatures probably will remain near or above normal.

MonaMotor Organization Unchanged by Merger

CLEVELAND, July 26.—Management and operation of the MonaMotor Oil Co., Council Bluffs, Iowa, will not be changed by its affiliation with the Barnsdall Corp., said H. A. Searle, MonaMotor president.

MonaMotor has definitely become a part of Barnsdall, said Mr. Searle. Other recent midwestern additions to Barnsdall's marketing outlets are the O'Neil Oil Co., Milwaukee, and the Brownell Corp., Sioux Falls, S. D. Barnsdall now has extensive marketing outlets in the middle west and north of the Texas line.

MonaMotor entered the oil business in 1889 manufacturing greases and compounding motor oils. It has plants at Council Bluffs, Omaha, and Toledo, and owns and operates radio station KOIL at Council Bluffs.

NEW YORK—J. J. Lynch, natural gas department of Henry L. Doherty & Co., and Miss Cecelia J. Brady were married June 28 at New Rochelle, N. Y.

Shipments From Southern California

LOS ANGELES, July 24.—Bulk petroleum shipments from Southern California ports to Foreign and Atlantic Seaboard ports for week ended July 19 were 1,202,768 barrels as compared with 921,630 barrels for previous week. Destination and quantity of shipments were as follows, (figures in barrels):

Destination	Crude	Gasoline	Diesel	Petrolite	Fuel	Gas-Oil	Total
Pacific For.	146,141	96,059	11,781	59,639	103,758	.....	417,378
				Kerosene			
Atlantic Dom.	.....	226,558	64,679	77,494	.....	69,704	438,435
Atlantic For.	.....	249,483	73,897	.....	23,573	.....	346,955

Prices 10 Years Ago
July 26, 1920

	Oklahoma	Penna.
58-60 U. S. Motor....	23.50-24.00c	27.25c
80-84 Natural	20.00-21.50c	.....
Kerosene (41-43 Okla.; 47 w.w. Pa.)	10.50-11.00c	15.50c
Fuel Oil (24-26 Okla.; 38-40 Pa.)	$3.15-$3.30	12.50c
Crude (Okla. 35-35.9)	$3.50	$6.10
Chicago tank wagon		26.00c

Prices A Year Ago
July 29, 1929

	Oklahoma	Penna.
58-60 U. S. Motor....	7.9776c	10.00-10.25c
Grade A Natural.....	6.25-6.50c	.....
Kerosene (Okla. 41-43; Pa. 47 w. w.)	5.125-5.375c	6.75-7.25c
Fuel Oil (Okla. 24-26; Pa. 36-40)....	$0.70-$0.825	4.375-5.00c
Crude (Okla. 35-35.9)	$1.40	$3.80
Chicago tank wagon		16.00c

Mid-Continent Refinery Markets

Good Demand Improves Gasoline Prices

Staff Special
TULSA, July 26

THE price situation in the Mid-Continent gasoline market improved late in the week of July 21-26 as demand continued to hold up well in all districts.

Odd lots of distress gasoline appeared early in the week and prices fluctuated Friday and Saturday, the bulk of this distress gasoline apparently had been absorbed and there was a definite trend upward in prices.

Two or three Oklahoma refiners who must ship almost as fast as they make gasoline and who has sold 58-60, 437 e.p. gasoline as low as 5.625 and 5.75 cents to brokers, were quoting 6 cents and above July 26.

Other refiners quoted 58-60 U. S. Motor gasoline at 6.25 to 6.50 cents.

Kansas refiners experienced little change in either demand or price. North and West Texas refiners July 26 reported some improvement and several expressed the opinion there would be further improvement next week.

Louisiana and Arkansas prices did not change. Demand was fair.

An exporter inquired for bids on 4,000,000 gallons of fighting grade aviation gasoline. As far as could be learned July 26, none had been bought. Refiners operating on Mid-Continent crude said that in order to make the aviation gasoline they would have to cut about 25 to 27 per cent kerosene as compared with about the same yield of gasoline. If they took the order for the gasoline they would find themselves with at least 4,000,000 gallons of kerosene on their hands—a situation they would not care for at present.

Natural gasoline climbed 0.25 to 0.50 cent a gallon with demand comparatively active. Two or three sizeable orders were placed for shipment the remainder of July. At least two major companies were in the market, one seeking grade AA and the other seeking all grades. One company July 26 announced it would pay 4.75 cents for grade AA. Grades BB and C accordingly moved to 4.50 cents.

There was some evidence this week of the report that California does not have as much natural gasoline to move coastwise as it had last year. A Mid-Continent manufacturer sold a cargo for shipment from the Gulf to an eastern refiner. Seldom in the last several months have Mid-Continent manufacturers had an opportunity to get any natural business from the east coast.

Kerosene demand continued to be steady but there was not sufficient volume to cause material change in the burdensome stocks. Prices continued to show downward tendencies. Kansas refiners were the exception, in that they had a fair demand but their product is said to be better than the average Mid-Continent grade.

Price of 41-43 w. w. kerosene in Oklahoma touched 3.25 cents a gallon with reports of some at 3 cents for resale. The market was pegged at 3 cents in North Texas. Prices in differential territory were unchanged in Louisiana and Arkansas markets.

There was some improvement in demand for distillates, particularly the low cold test grades. Jobbers evidently were buying the oil for storage. The buying had the effect of raising the low of the resale price range from 2.75 cents to 2.875 to 3 cents in Oklahoma.

Gas oils were in steady demand in most sections at generally unchanged prices. In Louisiana the commodity was reported comparatively scarce and prices advanced 0.25 cent a gallon.

Fuel oils remained comparatively sluggish with price ranges unchanged. The most active grade from a supply and demand standpoint was 28-30. The few refiners making that grade reported they had no difficulty moving the product but they had found competition stiff for the comparatively small amount of business developed for other grades.

Neutral oils and bright stock prices were steady. Demand was comparatively light, most manufacturers reported. Inquiries were somewhat better, however, for neutral oils for future shipment. The season is about here when compounders become more interested in neutral oils for winter requirements.

Wax demand was considerably better in most quarters but prices showed no material changes. Most of the inquiries received were for deferred shipment, refiners reported.

Continental to Reduce Runs

PONCA CITY—Continental Oil Co. has announced that effective Aug. 1 it will reduce its runs from leases in the Wichita Falls district 50 per cent, based upon the average of its runs in May and June. It applies to properties in Wichita, Young, Archer and Jack counties. It will accept for tender shipment equal to its capacity oil from any lease to which it is connected, for delivery to connecting pipelines or refiners contiguous to its lines.

Deer Oil Corp. Takes Over Two Refineries

TULSA, July 26.—The Deer Oil Corp. has taken over the Luling and Brownwood, Texas refineries of the Central Texas Refining Co. The Luling plant has a capacity of 2500 barrels and the Brownwood plant 2,000 barrels a day.

The Deer is a newly organized Delaware corporation with 5,000 shares of no par value. T. J. Mullin, president of the Cranfill Reynolds Pipe Line Co., a Moody-Segraves interest, is chairman of the new company. Victor H. Smith, president of the Gulf States Terminal & Transport Co. and affiliated companies, is president of the Deer.

K. C. Woodruff, formerly general manager of Gulf States and White Oak, has been made vice-president and general manager of the new company. Ray Uhlman is to be in charge of sales from the Luling offices.

General offices will be on the seventh floor of the Esperson building, Houston, and the fourteenth floor of the Hunt building, Tulsa.

White Oak Adds Lube Facilities

TULSA, July 26.—White Oak Refining Co. is improving facilities at its Allen, Okla., plant by adding new lubricating oil equipment. The new equipment will be completed and ready for operation about Aug. 1.

Earl Petty, formerly southwestern manager of the Smith Engineering Co., has been appointed assistant to Victor H. Smith in charge of refineries, pipe lines, and terminals of the White Oak and affiliated companies. B. F. Green has been placed in charge of purchasing, accounting, insurance and taxes of the group of companies.

The White Oak recently opened sales offices in the Foshay tower, Minneapolis. F. M. Starling is in charge as northwestern sales manager. R. Van Efhen is his assistant.

Comparative Prices of 58-60 U. S. Motor Gasoline, 437 E. P., Group 3 and Point of Origin, to Jobbers Only

In Effect July 28

	Price F.O.B. Group 3		*Price F.O.B. Point of Origin*		*If for Particular Destination*
Oklahoma	6.4000	(Wt. Avg.)	6.4000	(Wt. Avg.)	
Kansas	6.25–6.75				S. O. Neb. & Indiana Territory, etc.
Kansas			7.2115	(Wt. Avg.)	Kansas only.
North Texas	6.00		6.00		
West Texas	6.00–6.25		6.00–6.25		
Louisiana-Arkansas	6.25–6.50				Michigan, Ohio and Indiana.
Louisiana-Arkansas			6.75		State or differential haul.
Indiana-Illinois	5.875–6.50		*		S. O. Indiana territory except Detroit and vicinity. For Ohio on delivered basis only.

*Shipments made from E. Chicago, Ind., and Wood River, Ill., according to conditions and freight rates; no prices F.O.B. point of origin can be given.

Chicago Resale Market

CHICAGO, July 26.

SPOT trading of all commodities continued light in the Chicago market the past week. Gasoline shipments against contracts were heavy. Several large contracts for burning oils over next winter were closed.

U. S. Motor for shipment to points north and west of Chicago was quoted 0.125 cent lower at 5.875 to 6.25 cents, f. o. b. Group 3. It was offered at these prices by the Chicago trade for shipment from nearly all Mid-Continent districts as well as central states refineries.

Differential territory market also was lower. Delivered in Detroit, U. S. Motor was quoted from 8.50 cents up. This figure was shaded in some instances.

Following prices represent majority of sales made on Group 3 freight basis, although shipments may originate in other refining districts such as North and West Texas, Arkansas, Louisiana, Indiana, Illinois, Kentucky, etc.

	Prices July 28	Prices July 21	Prices July 14
58-60 U. S. Motor, 437 e.p.	5.875– 6.25	5.875– 6.25	6.00 – 6.375
60-62 437 e.p. gasoline	6.00 – 6.375	6.00 – 6.375	6.125– 6.50
60-62 400 e.p. gasoline	6.125– 6.50	6.25 – 6.75	6.25 – 6.75
64-66 375 e.p. gasoline	6.75 – 7.00	6.875– 7.25	6.875– 7.25
68-70 350-360 e.p. gasoline	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
*Domestic Aviation Gasoline	9.00 – 9.25	9.00 – 9.25	9.00 – 9.25
41-43 w.w. kerosene	3.25 – 3.625	3.25 – 3.625	3.375– 3.625
42-44 w.w. kerosene	3.875– 4.25	3.875– 4.25	3.875– 4.25
38-40 straw distillate	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
32-36 ordinary dark gas oil	2.125– 2.375	2.125– 2.375	2.125– 2.375
32-36 dark zero gas oil	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
32-36 straw zero gas oil	2.625– 2.75	2.625– 2.75	2.625– 2.75
28-30 zero fuel oil (per bbl.)	$0.80 –$0.85	$0.825–$0.85	$0.825–$0.85
28-30 fuel oil (per bbl.)	$0.80 –$0.85	$0.825–$0.85	$0.825–$0.85
24-26 fuel oil (per bbl.)	$0.60 –$0.65	$0.625–$0.675	$0.625–$0.675
18-22 fuel oil, low sulfur (per bbl.)	$0.50 –$0.575	$0.50 –$0.575	$0.50 –$0.575
18-22 fuel oil, high sulfur zero (per bbl.)	$0.50 –$0.575	$0.50 –$0.575	$0.50 –$0.575

*Prices are based on U. S. Gov't specifications or better. Present Gov't specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% recovery at 221°; 90% at 311°; 96% at 347°; end point 374° F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

Weighted Average Prices

OKLAHOMA

	July 28		July 21		July 14	
	No. of Cars	Price	No. of Cars	Price	No. of Cars	Price
58-60 U. S. Motor, 437 e.p.	10	6.4000	8	6.3125	8	6.5156
60-62 437 e.p. gasoline	..	6.50–6.75 (See note)	..	6.375–6.625 (See note)	..	6.50–6.75 (See note)
60-62 400 e.p. gasoline	..	6.75–7.00 (See note)	..	6.75–7.00 (See note)	..	6.75–6.875 (See note)
64-66 375 e.p. gasoline	..	7.00–7.25 (See note)	..	7.00–7.25 (See note)	..	7.50–7.75 (See note)
58-60 437 e.p. gasoline (Full U. S. Motor specifications not guaranteed.)	..	5.875–6.375	..	6.00–6.50	..	6.00–6.50

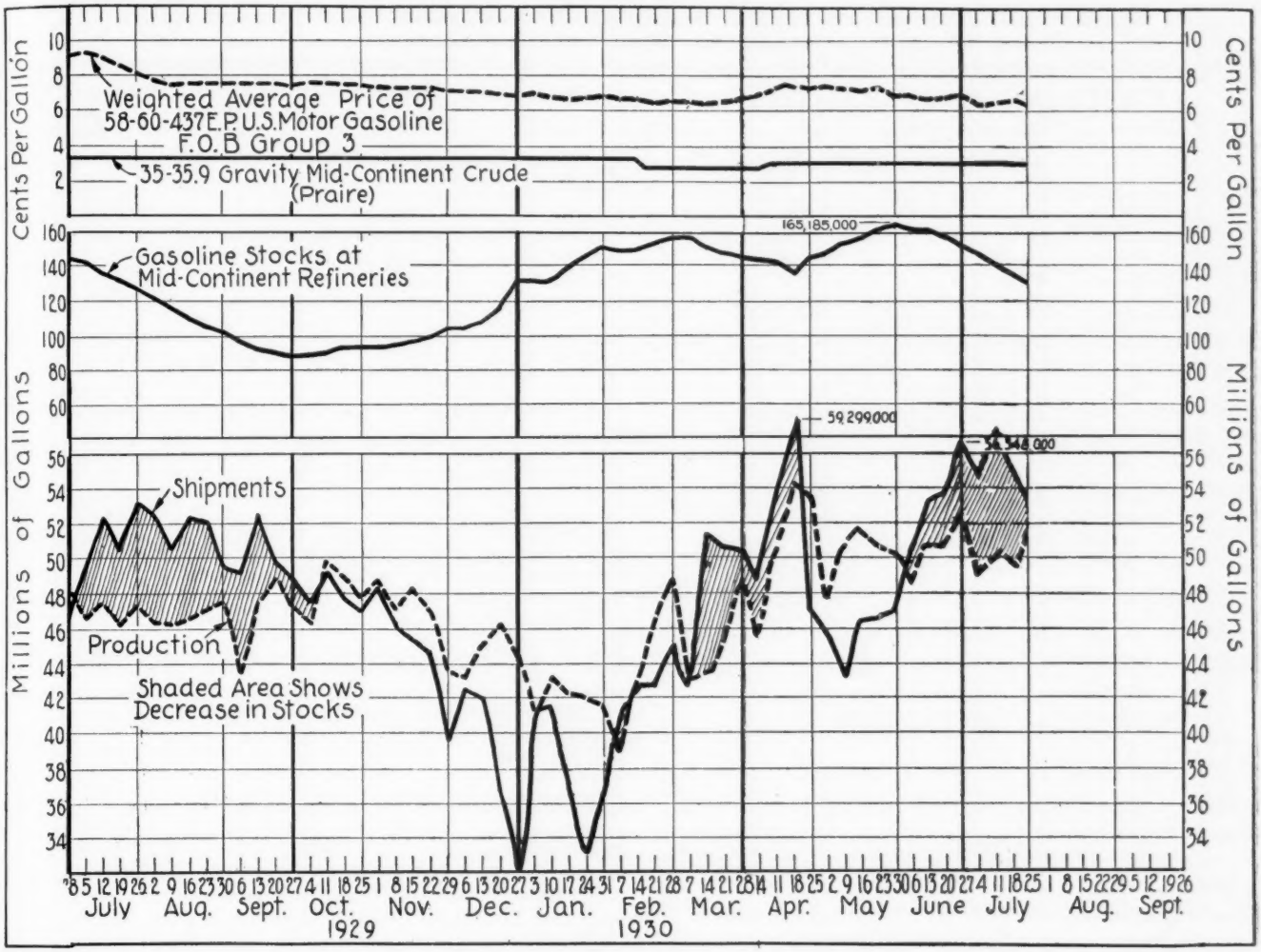
KANSAS

	July 28		July 21		July 14	
	No. of cars	Price	No. of cars	Price	No. of Cars	Price
58-60 U. S. Motor, 437 e.p.	13	7.2115	12	7.2500	10	7.2500

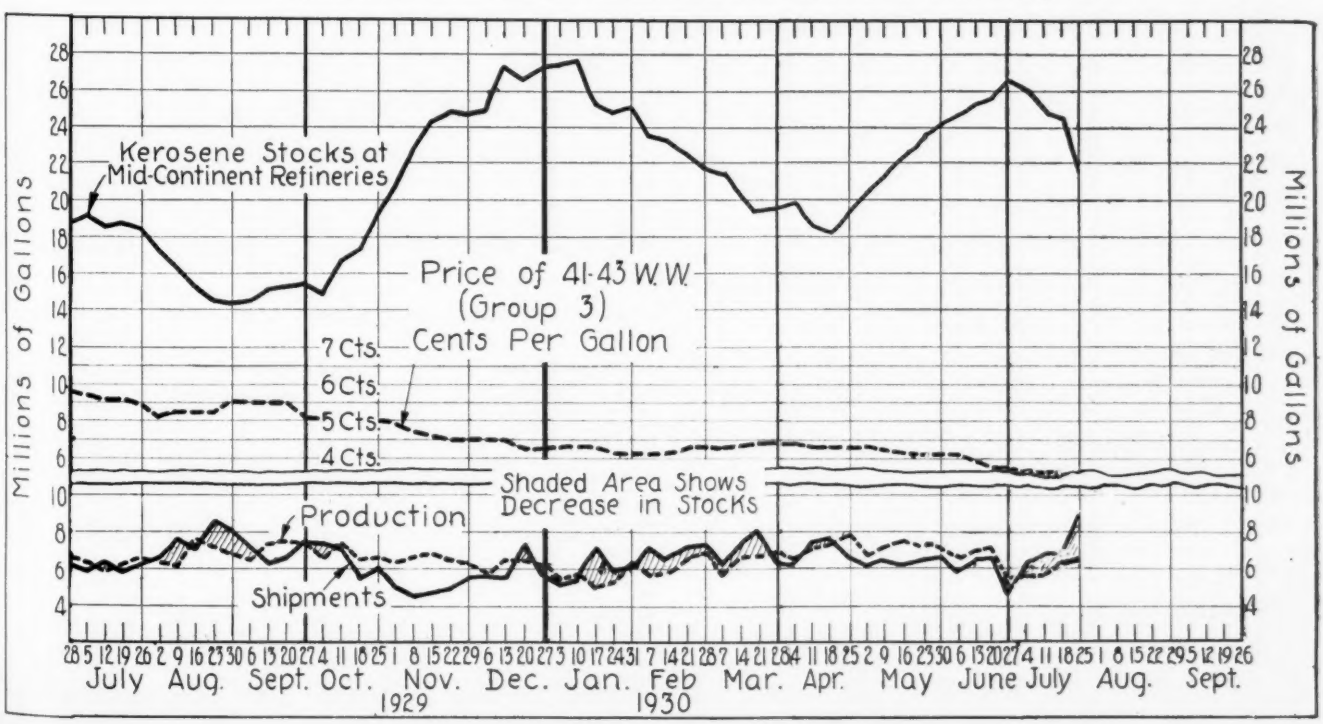
Note: No sales reported for the gasoline marked "see note" on the dates so marked; prices shown on such dates represent majority of quotations only.

Barometer of Mid-Continent Refinery Market—Week Ending July 25

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News



Prices shown above are extended to date shown in Refinery Market and Crude tables in Market section of this issue and stocks, shipments and Production are extended to date as shown in the table on page 106



Refinery Markets on Light Oils and Lubricants

Prices given below are in cents per gallon, except where $ is shown. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(These Refinery Prices compiled in the OIL PRICE HANDBOOK for a whole year)

GASOLINE AND NAPHTHA

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices July 28	Prices July 21	Prices July 14
48-50 450 e.p. naphtha	6.25	6.25	6.25
50-52 450 e.p. naphtha	6.25	6.25	6.25
56-58 450 e.p. gasoline	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
58-60 450 e.p. gasoline	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
64-66 390 e.p. gasoline	6.75 – 7.25	6.75 – 7.25	6.75 – 7.25
68-70 350-360 e.p. gasoline	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
‡Domestic Aviation Gasoline	8.50 – 9.25	8.50 – 9.25	8.50 – 9.25

‡Prices based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167° F., and not less than 122° F.; 50% rec. at 221°; 90% at 311°; 96% at 347°; end point, 374°F. Fighting grade in some instances sells at a premium over domestic aviation grade.

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

52-54 Naphtha	7.25 – 7.75	7.50 – 7.75	7.50 – 7.75
54-56 Naphtha	7.25 – 7.75	7.50 – 7.75	7.50 – 7.75
58-60 U.S. Motor 437 e.p.	7.50 – 8.25	7.75 – 8.25	7.875– 8.25
60-62 400-410 e.p. gasoline	7.75 – 8.50	8.00 – 8.50	8.125– 8.50
64-66 390 e.p. gasoline	8.125– 9.00	8.125– 9.00	8.375– 9.00
68-70 350-360 e.p.	8.50 – 9.25	8.75 – 9.25	8.75 – 9.25

OHIO (Quotations of S. O. Ohio. 4c state tax to be added.)

U. S. Motor Gasoline

Ohio, delivery at any point	11.00	11.00	11.00

KANSAS (F. o. b. refinery Kansas destination)

60-62 437 e.p. gasoline	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
60-62 400 e.p. gasoline	7.50 – 7.75	7.50 – 7.75	7.50 – 7.75
64-66 375 e.p. gasoline	8.00 – 8.25	8.00 – 8.25	8.00 – 8.25

NORTH TEXAS (F. o. b. North Texas refineries)

56-58 450 e.p. gasoline	5.75	5.75	6.00 – 6.25
58-60 450 e.p. gasoline	5.75	5.75	6.00 – 6.25
58-60 U.S. Motor 437 e.p.	6.00	5.75 – 6.00	6.00 – 6.25
60-62 400 e.p. gasoline	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
64-66 390 e.p. gasoline	6.75	6.75	6.75
64-66 375 e.p. gasoline	7.00	7.00	7.00
68-70 350-360 e.p. gasoline	7.25	7.25	7.25

****WEST TEXAS** (F. o. b. West Texas refinery, for unrestricted shipment)

50-52 naphtha	5.75	5.75	5.75 – 6.00
58-60 437 e.p. gasoline	5.75 – 6.00	5.75 – 6.00	6.00
58-60 U.S. Motor 437 e.p. gasoline	6.00 – 6.25	6.00 – 6.25	6.25

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

58-60 U.S. Motor 437 e. p.	6.75	6.75	6.75

ARKANSAS (Ark., N. La. and Miss. destination)

58-60 U.S. Motor 437 e.p.	6.75	6.75	6.75

CALIFORNIA (3c tax to be added to California gasoline prices if used in state.)

54-58 U.S. Motor 437 e.p.	9.50 –11.50	9.50 –11.50	6.75 – 8.00
54-58 U.S. Motor, for outside state shipment	7.50 – 9.00	7.50 – 8.75	7.00 – 8.25
58-61 375-400 e.p. gasoline	10.50 –12.50	10.50 –12.50	8.25 – 9.50
42-45 Engine Distillate 445-480 e.p.	8.50 – 9.50	8.00 – 9.00	6.50 – 7.75

NATURAL GASOLINE

(Note: End point of all grades, not over 375 F. Corrosion test adopted Oct. 1, 1927; A.S.T.M. Method D130-27T; doctor test, July 2, 1928.)

OKLAHOMA (F. o. b. Oklahoma refineries)

Grade AA, 80-87.9, 90% Recovery	4.75	4.25 – 4.50	4.00
Grade A, 72-79.9, 90% Recovery	4.50 – 4.75	4.25 – 4.50	4.00 – 4.25
Grade BB, 84-92, 85% Recovery	4.50	4.25	3.75 – 3.875
Grade B, 76-83.9, 85% Recovery	4.50	4.25	4.00
Grade C, 80-92, 78% Recovery	4.50	4.25	3.75 – 3.875

NORTH TEXAS (F. o. b. Breckenridge)

Grade AA, 80-87.9, 90% Recovery	4.75	4.25 – 4.50	4.00
Grade A, 72-79.9, 90% Recovery	4.50 – 4.75	4.25 – 4.50	4.00 – 4.25
Grade BB, 84-92, 85% Recovery	4.50	4.25	3.75 – 3.875
Grade B, 76-83.9, 85% Recovery	4.50	4.25	4.00
Grade C, 80-92, 78% Recovery	4.50	4.25	3.75 – 3.875

NORTH LOUISIANA (F. o. b. Monroe District)

	Prices July 28	Prices July 21	Prices July 14
Grade AA	†4.75	†4.50	†4.25
Grade BB	†4.50	†4.25	†4.00
Grade C	†4.50	†4.25	†4.00

CALIFORNIA (F. o. b. California refineries)

75-85, 375-390 e.p. blend	7.00 – 8.25	7.50 – 8.25	5.50 – 7.25

BURNING OILS

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

45 w.w. kerosene	4.375– 4.75	4.375– 4.75	4.50 – 4.75
46 w.w. kerosene	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
47 w.w. kerosene	5.125– 5.50	5.125– 5.50	5.125– 5.50
300 mineral seal	5.50 – 6.00	5.50 – 6.00	5.50 – 6.00

OKLAHOMA (F. o. b. Oklahoma refineries)

41-43 w.w. kerosene	3.25 – 3.75	3.375– 3.75	3.375– 3.75
42-44 w.w. kerosene	4.00 – 4.25	4.00 – 4.25	4.00 – 4.25

KANSAS (F. o. b. refinery Kansas destination)

41-43 w.w. kerosene	4.50 – 4.75	4.50 – 4.75	4.50 – 4.75
42-44 w.w. kerosene	5.00 – 5.25	5.00 – 5.25	5.00 – 5.25

NORTH TEXAS (F. o. b. North Texas refineries)

40-42 w.w. kerosene	3.00	3.00	3.00
41-43 w.w. kerosene	3.00 – 3.25	3.00 – 3.25	3.25

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

41-43 w.w. kerosene	4.25	4.25	4.25
42-44 w.w. kerosene	4.50	4.50	4.50

ARKANSAS (Ark., N. La. and Miss. destination)

42-44 w.w. kerosene	4.125	4.125	4.125

CALIFORNIA (F. o. b. California refineries)

38-40 w.w. kerosene	4.00 – 5.00	4.00 – 5.00	4.00 – 5.00

NEUTRAL OIL

PENNSYLVANIA (F. o. b. Western Pennsylvania refineries)

Vis.		(Viscosity at 70° F.)	
200 No. 3 Assoc. Filt.	19.00 –21.00	19.00 –21.00	19.00 –21.00
180 No. 3 Assoc. Filt.	16.50 –17.50	16.50 –17.50	16.50 –17.50
150 No. 3 Assoc. Filt.	12.25 –14.00	12.25 –14.00	12.50 –14.00
		(Non Viscous)	
34 Grav. 330-340 Flash	5.75 – 6.50	5.75 – 6.50	5.75 – 6.50

****OKLAHOMA** (F. o. b. Oklahoma refineries)

Vis.	Color	(Viscosity at 100° F.)		
100	No. 2	6.00 – 7.00	6.00 – 7.00	6.00 – 7.00
150	No. 3	8.00 – 8.50	8.00 – 8.50	8.00 – 8.50
150	No. 4	7.00 – 8.00	7.00 – 8.00	7.00 – 8.00
180	No. 3	9.00 –10.00	9.00 –10.00	9.00 –10.00
180	No. 4	9.00 – 9.50	9.00 – 9.50	9.00 – 9.50
180	No. 5	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
200	No. 3	11.50	11.50	11.50 –12.00
200	No. 4	10.00 –11.00	10.00 –11.00	10.00 –11.00
200	No. 5	10.50	10.50	10.50
220	No. 3	12.50 –13.50	12.50 –13.50	12.50 –13.50
220	No. 4	12.00 –12.50	12.00 –12.50	12.00 –12.50
220	No. 5	11.00 –12.00	11.00 –12.00	11.00 –12.00
240	No. 3	13.50 –15.00	13.50 –15.00	13.50 –15.00
240	No. 4	12.50 –14.00	12.50 –14.00	12.50 –14.00
240	No. 5	12.00 –13.00	12.00 –13.00	12.00 –13.00
280	No. 3	17.00	17.00	17.00
280	No. 4	15.00 –16.00	15.00 –16.00	15.00 –16.00
280	No. 5	14.00 –15.00	14.00 –15.00	14.00 –15.00

†Prices nominal ††Only one refiner quoting *Quotations only **Represents Both Sales and Quotations.

Refinery Markets Wax, Lubricants, Heavy Oil

Prices given below are in cents per gallon, except where $ is shown. They represent prices made only to domestic jobbers who resell to the consuming public, except where otherwise noted.

(For quick reference to Refinery Prices, get the OIL PRICE HANDBOOK, published annually)

GULF COASTAL (F. o. b. Gulf Coastal refineries)

Vis.	Color	Prices July 28	Prices July 21	Prices July 14
		(Viscosity at 100° F., pour test 0)		
100	No. 2 Pale	6.50 – 7.00	6.50 – 7.00	6.50 – 7.00
200	No. 3 Pale	9.50 – 9.75	9.50 – 9.75	9.50 – 9.75
300	No. 3 Pale	10.75 –11.00	10.75 –11.00	10.75 –11.00
500	No. 3½ Pale	12.00 –12.25	12.00 –12.25	12.00 –12.25
750	No. 4 Pale	13.50 –13.75	13.50 –13.75	13.50 –13.75
1200	No. 5 Pale	16.00 –16.50	16.00 –16.50	16.00 –16.50
2000	No. 4 Pale	17.00 –17.50	17.00 –17.50	17.00 –17.50
200	No. 5½ Red Oil	8.75 – 9.00	8.75 – 9.00	8.75 – 9.00
300	No. 5½ Red Oil	10.00 –10.25	10.00 –10.25	10.00 –10.25
500	No. 6 Red Oil	11.25 –11.50	11.25 –11.50	11.25 –11.50
750	No. 6 Red Oil	12.75 –13.00	12.75 –13.00	12.75 –13.00
1200	No. 5-6 Red Oil	15.00 –15.25	15.00 –15.25	15.00 –15.25
2000	No. 6 Plus Red Oil	17.00 –17.50	17.00 –17.50	17.00 –17.50

‡CALIFORNIA (F. o. b. California refineries)

Vis.	Color	(Viscosity at 100° F.)		
100	No. 3	9.50 –10.00	9.50 –10.00	9.50 –10.00
200	No. 3	11.50	11.50	11.50
300	No. 3	13.00	13.00	13.00
450	No. 3	15.50	15.50	15.50
550	No 3	16.50	16.50	16.50
600	No. 3	17.00	17.00	17.00
200	No. 5	11.00	11.00	11.00
300	No. 5	12.00	12.00	12.00
400	No. 5	14.00	14.00	14.00
500	No. 5	15.00	15.00	15.00
600	No. 5	16.00	16.00	16.00
700	No. 7	18.00	18.00	18.00

‡Neutral oils not manufactured commercially in California.

CYLINDER STOCKS

OKLAHOMA (F. o. b. Oklahoma refineries)

(Bright stock prices represent quotations to domestic jobbers only.)

190-200 Vis. D at 210° Brt. St	33.00	33.00	35.00 –37.00
150-160 Vis. D at 210° Brt. St., 15-20 cold test	28.00	28.00	28.00 –32.00
150-160 Vis. D Brt. Stock, 25-45 cold test	27.00	27.00	28.00 –30.00
150-160 Vis. E 210° Brt. St	26 00	26.00	28.00
600 St. Ref. Olive Green	9.00	9.00	9.00 –10.00
600 St. Ref. Dark Green	8.00 – 9.00	8.00 – 9.00	9.00
Black Oil	5.00	5.00	5.00

PENNSYLVANIA (F. o. b. Western Penna. refineries) (A.S.T.M. Tests)

600 Steam Refined, filterable	10.00 –11.00	10.00 –11.00	9.50 –11.00
650 Steam Refined	15.00 –17.00	16.00 –18.00	16.00 –18.00
600 Flash	19.50 –21.00	20.00 –21.00	20.50 –21.00
630 Flash	25.50 –28.00	28.00 –29.00	28.00 –29.00
600 Warren E	17.00 –18.00	17.00 –18.00	17.00 –18.00
600 Oil City E	16.00 –17.00	16.00 –17.00	16.50 –17.00
600 D Filtered	20.00 –22.00	21.00 –22.00	21.50 –22.00
Cold Test Stock, 40-50 p. p., 140-150 vis. at 210° 540-550 flash, No. 8 color	25.00 –26.00	25.00 –26.00	24.00 –26.00
40-50 p.p., 140-150 vis. at 210°, 540-550 flash, No. 6-6½ color diluted	23.00 –24.00	23.00 –24.00	23.00 –24.00

WAX

PENNSYLVANIA (Per pound, F. o. b. New York)

122-124 white crude scale, a.m.p.	2.125– 2.25	2.125– 2.25	2.125– 2.25
124-126 white crude scale, a.m.p.	2.125– 2.25	2.125– 2.25	2.125– 2.25

****OKLAHOMA** (Per pound in barrels; in a few instances, per pound in burlap bags; F. o. b. Oklahoma refineries)

124-126 White Crude Scale, a.m.p.	1.75 – 2.00	1.75 – 2.00	2.00 – 2.125

DISTILLATE, GAS AND FUEL OIL

PENNSYLVANIA (For outside Pittsburgh district)

36-40 fuel oil	3.125– 3.50	3.125– 3.50	3.125– 3.50
30-34 fuel oil	3.125– 3.25	3.125– 3.25	3.125– 3.25
28-32 fuel oil	3.125– 3.25	3.125– 3.25	3.125– 3.25

†Prices nominal ††Only one refiner quoting *Quotations only

OKLAHOMA (F. o. b. Oklahoma refineries)

	Prices July 28	Prices July 21	Prices July 14
38-40 straw distillate	2.875– 3.125	2.875– 3.125	2.875– 3.125
36-38 straw distillate	2.75 – 2.875	2.75 – 2.875	2.75 – 2.875
32-36 straw gas oil	2.375– 2.50	2.375– 2.50	2.375– 2.50
32-36 straw gas oil zero	2.625– 2.75	2.625– 2.75	2.625– 2.75
32-36 dark gas oil	2.125– 2.375	2.125– 2.375	2.125– 2.375
32-36 dark gas oil zero	2.375– 2.50	2.375– 2.50	2.375– 2.50
28-30 zero fuel oil (per bbl.)	$0.85 – 0.90	$0.85 – 0.90	$0.85 – 0.90
28-30 fuel oil (per bbl.)	$0.80 – 0.85	$0.80 – 0.85	$0.80 – 0.85
26-28 fuel oil (per bbl.)	$0.70 – 0.75	$0.70 – 0.75	$0.70 – 0.75
24-26 fuel oil (per bbl.)	$0.60 – 0.70	$0.60 – 0.70	$0.65 – 0.70
22-26 fuel oil (per bbl.)	$0.60 – 0.65	$0.60 – 0.65	$0.60 – 0.65
18-22 fuel oil (per bbl.)	$0.475– 0.525	$0.475– 0.525	$0.475– 0.525
16-20 fuel oil (per bbl.)	$0.425– 0.475	$0.425– 0.475	$0.425– 0.475
14-16 fuel oil (per bbl.)	$0.40 – 0.45	$0.40 – 0.45	$0.40 – 0.45

KANSAS (F. o. b. refinery Kansas destination)

38-40 straw distillate	3.25 – 3.50	3.25 – 3.50	3.25 – 3.50
36-38 straw distillate	3.00	3.00	3.00
32-36 straw gas oil	3.00	3.00	3.00
18-22 fuel oil (per bbl.)	$0.70 – 0.75	$0.70 – 0.75	$0.70 – 0.75
10-14 fuel oil (per bbl.)	$0.55 – 0.65	$0.55 – 0.65	$0.55 – 0.65

NORTH TEXAS (F. o. b. North Texas refineries)

38-40 straw distillate	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00
38-40 p.w. treated distillate	3.125– 3.25	3.125– 3.25	3.125– 3.25
32-36 gas oil, cracked	2.00 – 2.375	2.00 – 2.375	2.00 – 2.375
32-36 St. reduced gas oil	2.00 – 2.25	2.00 – 2.25	2.00 – 2.25
24-26 fuel oil (per bbl.)	$0.50 –$0.55	$0.50 –$0.55	$0.50 –$0.55
20-24 fuel oil (per bbl.)	$0.45 –$0.50	$0.45 –$0.50	$0.45 –$0.50
18-22 fuel oil (per bbl.)	$0.40 –$0.45	$0.40 –$0.45	$0.40 –$0.45

****WEST TEXAS** (F. o. b. West Texas refinery, or unrestricted shipment)

34-38 gas oil	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
30-32 gas oil	1.875– 2.125	1.875– 2.125	1.875– 2.125
28-30 zero gas oil	2.25 – 2.50	2.25 – 2.50	2.25 – 2.50
18-22 fuel oil (per bbl.)	$0.50 –$0.60	$0.50 –$0.60	$0.50 –$0.60

NORTH LOUISIANA (N. La., Ark. and Miss. destination)

32-36 gas oil, dark	2.75	2.50	2.50
30-32 gas oil, straw	2.75	2.50	2.50
14-16 fuel oil (per bbl.)	$0.75 – 0.85	$0.75 – 0.85	$0.75 – 0.85

ARKANSAS (Ark., N. La. and Miss. destination)

30-32 gas oil, straw	2.50	2.50	2.50
32-36 dark gas oil	2.50	2.50	2.50
28-30 gas oil	2.50	2.50	2.25
20-24 fuel oil (per bbl.)	$0.95	$0.95	$0.95
9-12 fuel oil (per bbl.)	$0.75	$0.75	$0.75
Black oil	3.25	3.25	3.25

CALIFORNIA (F. o. b. San Joaquin Valley. Nominal pipe line charge to San Francisco 24c per bbl. more and to San Pedro 20c per bbl. more.)

14-18 fuel oil (per bbl.)	$0.45 –$0.65	$0.45 –$0.65	$0.45 –$0.65
14-18 Bunker oil (per bbl.)	$0.70 –$0.80	$0.70 –$0.80	$0.70 –$0.80
30-34 gas oil (per bbl.)	$0.80 –$1.00	$0.85 –$1.00	$0.85 –$0.95
27 Plus Diesel oil (per bbl.)	$0.80 –$1.00	$0.85 –$1.00	$0.85 –$0.95

PETROLATUMS

PENNSYLVANIA (Per pound, in barrels, carload lots, f. o. b. refinery. In tank cars ½c to ¾c per pound less.) Two refiners quoting.

Snow White	8.25 – 8.50	8.25 – 8.50	8.25 – 8.50
Lily White	7.25 – 7.50	7.25 – 7.50	7.25 – 7.50
Cream White	6.25 – 6.50	6.25 – 6.50	6.25 – 6.50
Light Amber	3.25 – 3.625	3.25 – 3.625	3.25 – 3.625
Amber	3.00 – 3.375	3.00 – 3.375	3.00 – 3.375
Red	2.75 – 3.00	2.75 – 3.00	2.75 – 3.00

PETROLEUM COKE

****OKLAHOMA** (F. o. b. Oklahoma refineries)

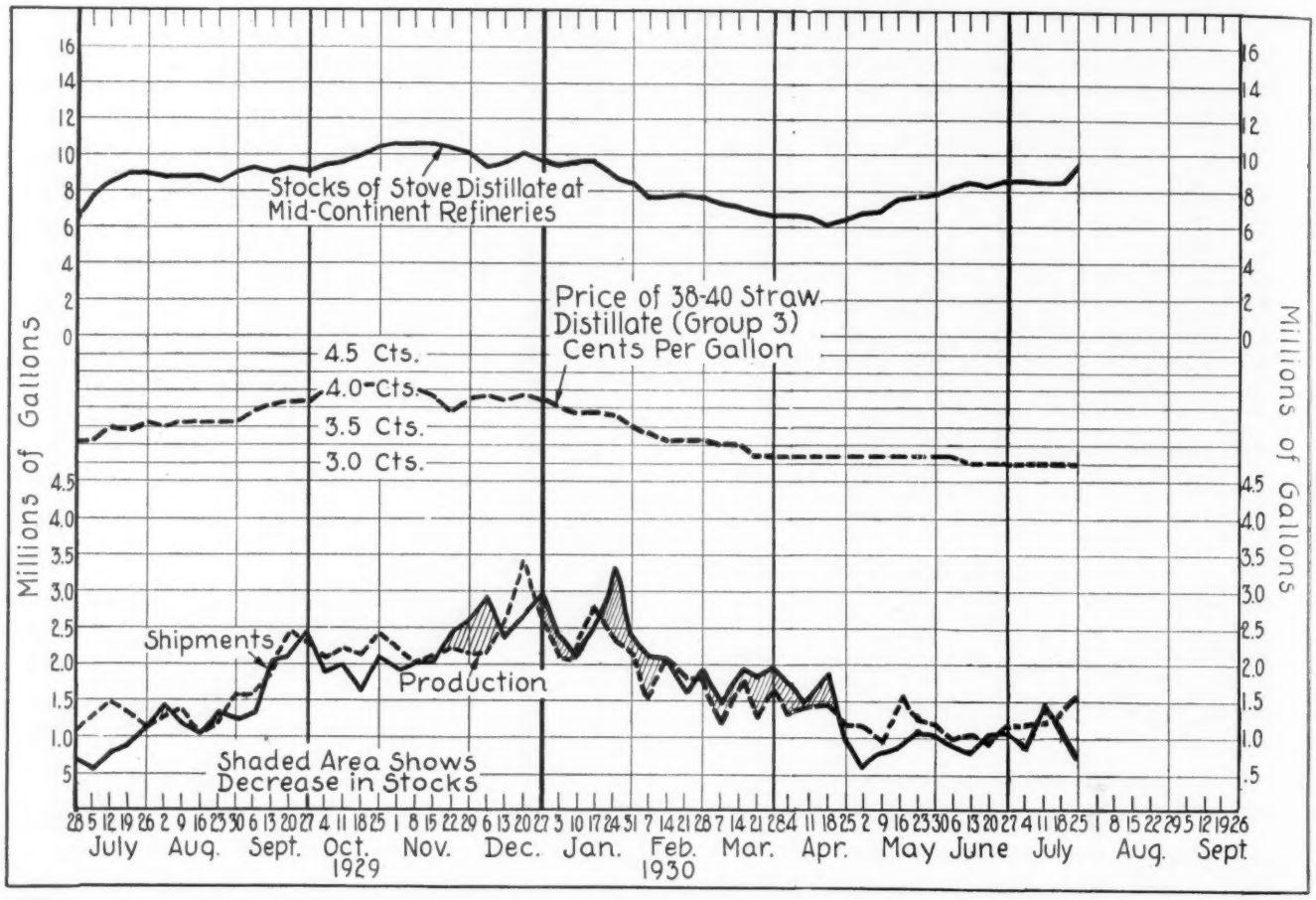
(Per ton in car lots)

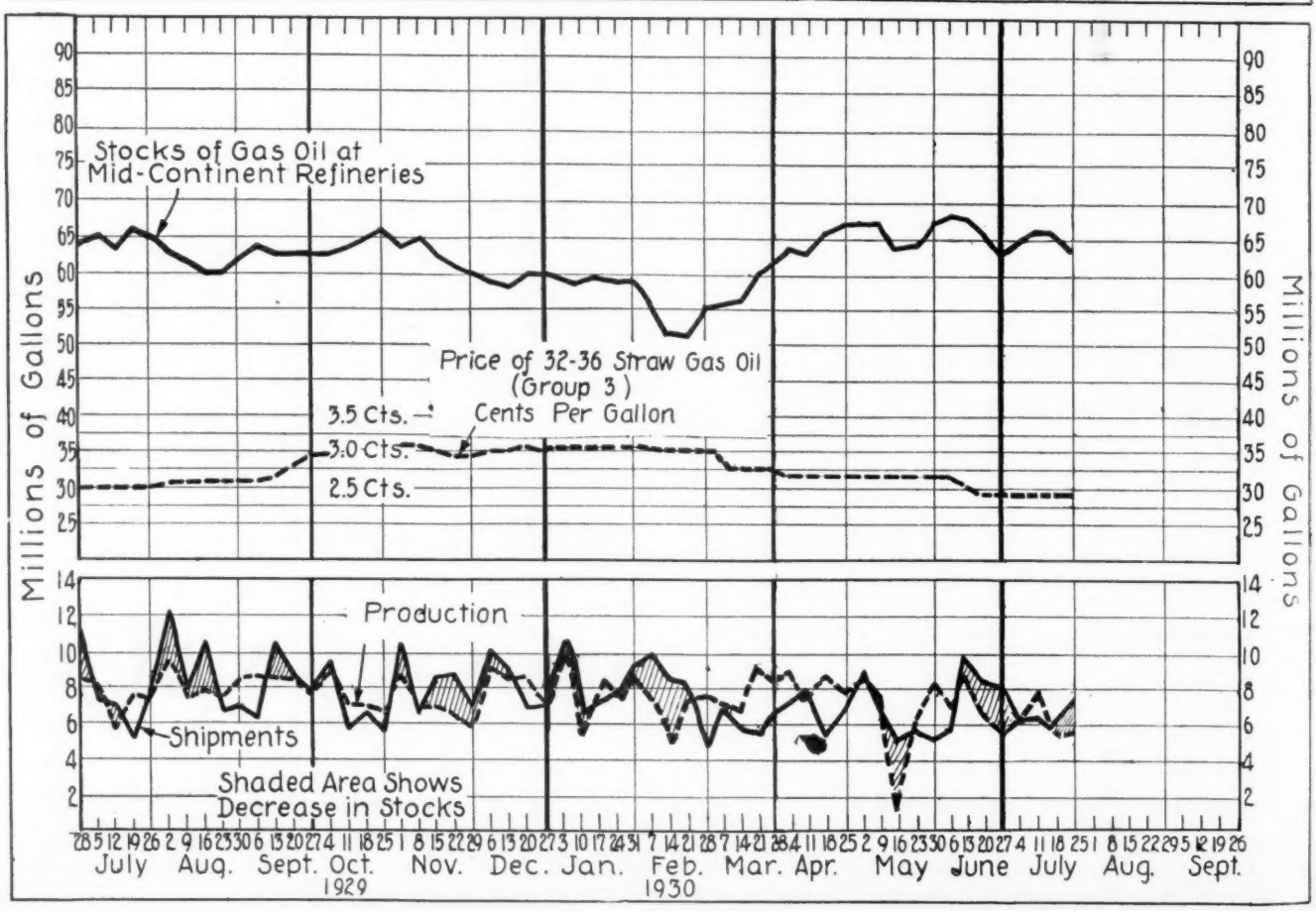
Lump	$4.50 –$5.00	$4.50 –$5.00	$4.50 – 5.00
Still run	$3.00	$3.00	$3.00
Breeze	$2.00	$2.00	$2.00

****Represents Both Sales and Quotations.**

Barometer of Mid-Continent Refinery Market—Week Ending July 25

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News


Stocks of Stove Distillate at Mid-Continent Refineries
Price of 38-40 Straw Distillate (Group 3) Cents Per Gallon
4.5 Cts.
4.0 Cts.
3.5 Cts.
3.0 Cts.
Shipments
Production
Shaded Area Shows Decrease in Stocks
Millions of Gallons
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept
1929
1930


Stocks of Gas Oil at Mid-Continent Refineries
Price of 32-36 Straw Gas Oil (Group 3) Cents Per Gallon
3.5 Cts.
3.0 Cts.
2.5 Cts.
Production
Shipments
Shaded Area Shows Decrease in Stocks
Millions of Gallons
July Aug. Sept. Oct. Nov. Dec. Jan. Feb. Mar. Apr. May June July Aug. Sept.
1929
1930

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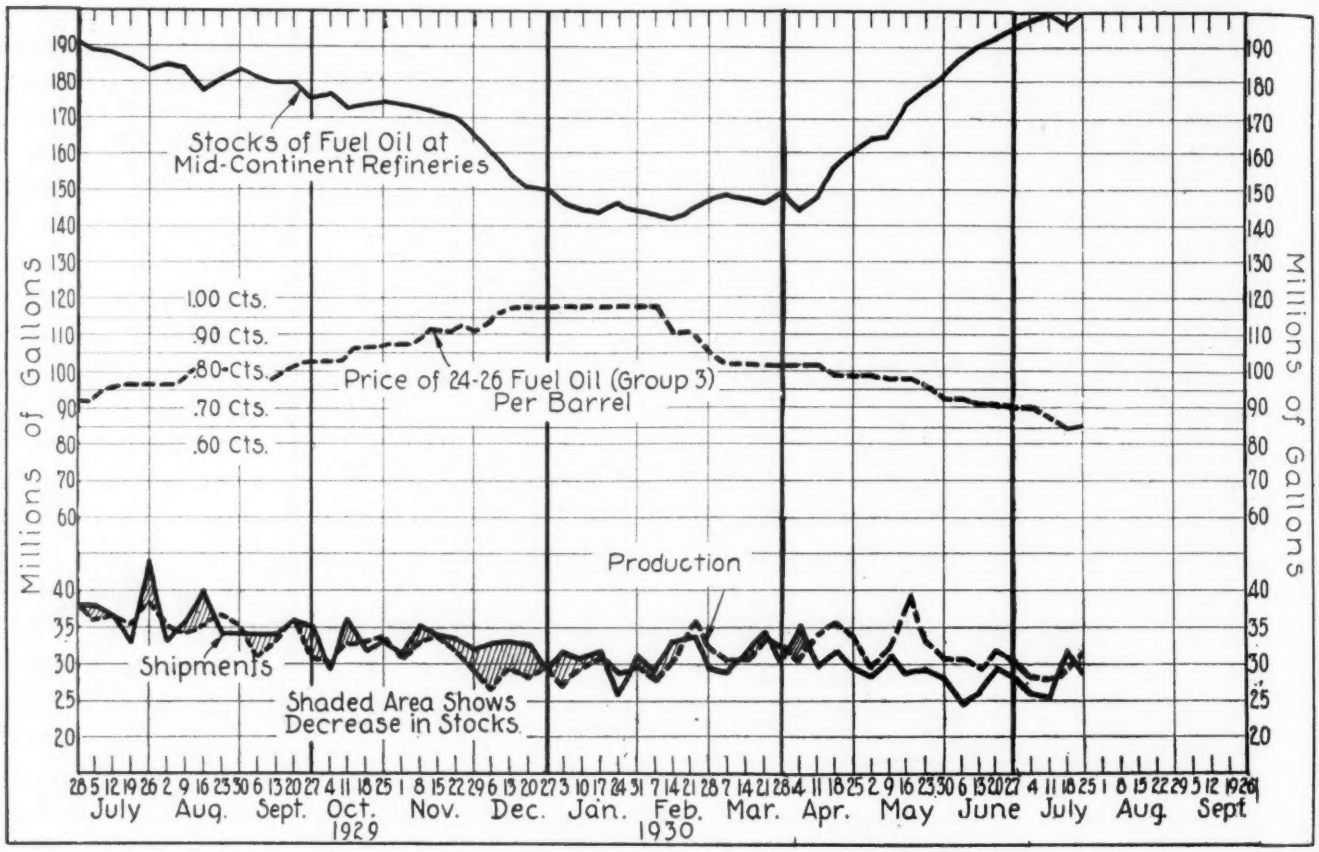
El Dorado, Kansas

Barometer of Mid-Continent Refinery Market—Week Ending July 25

Charted Course of Prices, Production, Shipments, Stocks of Principal Refined Products, Week by Week, From Reports Made by 93 Plants to National Petroleum News



California Refinery Market

Export Inquiries Increase

LOS ANGELES, July 24

PACIFIC Coast export markets became more optimistic the past week as the trade reported several promising inquiries. Although some discounted the inquiries as feelers, others felt considerable foreign business was in the offing, awaiting favorable quotations.

Early in the week an English buyer broadcast an inquiry for approximately 68,000 barrels of bunker C fuel oil and 8500 barrels of 30-34 gas-oil for August-September lifting. Doubting the sincerity of the inquiry several companies with ocean terminals declined to quote.

It was expected the successful quotation would be in line with those made to the United States Government on its Pearl Harbor requirements. Richfield Oil Co. was reported to be low bidder on 1,000,000 barrels of fuel oil with a flat price of $0.872 per barrel to June 30, 1931. This figure includes a delivery charge of $0.20 to $0.30 per barrel, leaving a net price in the neighborhood of $0.62 per barrel.

Other bids on this navy business ranged from $0.882 per barrel by Union Oil Co. to $1.05 by Standard Oil Co. of California.

A renewal of interest was reported among English buyers for 400 e.p. gasoline. Some traders think inquiries are exploratory and have shown little interest.

Oriental buyers were reported for several cargoes of cased kerosene and gasoline. Apparently this Far East trade expects to buy at low figures comparable with those reported made as an entering wedge by a major California company several months ago. Quotations reported as $1.75 per case for 400 e.p. gasoline, have failed to garner any business.

An inquiry was reported from Japan for quotations on approximately 70,000 barrels of 30 gravity crude, 30 per cent gasoline. It is thought to be a follow-up on a similar cargo sold in the spring at about $0.12 a barrel under the market.

Several members of the trade reported an advance in fuel oil quotations for bunkering ships in San Pedro harbor. An Independent said his quotations were $0.70 and $0.74 per barrel for along-side and barge delivery, respectively. Other small refiners equipped to handle this business indicated their quotations would range from 2 to 3 cents under these figures.

Quotations on bulk goods in the Pacific export market were generally unchanged.

Shading of prevailing posted tank wagon prices by one or two independents kept the southern Cali-

fornia retail market on edge. These refiners sold gasoline in tank-truck and trailer lots, at the rack, for 12 cents, 3.5 cents under prices posted by major companies.

Although reports of this low priced gasoline had not as yet affected the domestic tank car markets, the trade had varying opinions of its effect within the coming week.

For delivery within California, U. S. motor quotations ranged from 9.50 to 11.50 cents a gallon, tax additional.

Out of state movement ranged from 8 to 9.50 cents, with a few refiners shading to 7.50 in competitive territory of Utah and Arizona.

In the Los Angeles basin, fuel oil was available at less than $0.50 per barrel. One member of the trade said he had offered approximately 20,000 barrels of the commodity at $0.475. He expected he would have to shade this to $0.45 to sell it.

Demand was better for diesel and gas oil with the price on both products ranging upward from $0.80 a barrel. Several spot sales of a car here and there were made at $0.84 and indications pointed to slightly higher prices.

Pennsylvania Markets

All Commodities Quiet

CLEVELAND, July 26.—Generally speaking, the western Pennsylvania market was quiet in the week ended July 26. Gasoline prices moved down 0.25 cents and several grades of cylinder stocks were off 1 to 2 cents a gallon. Prices for bright stock improved. Kerosene, fuel oil, and neutral oils were steady.

The reduction in gasoline prices brought U. S. Motor down to 7.50 cents. A few sellers quoting this figure reported business was some, but not much, better at this price. Quotations for U. S. Motor ranged as high as 8.25 cents.

Manufacturers of bright stock reported their stocks were in a much better position. Material in the hands of brokers also was said to have been disposed of and the minimum quotations for No. 8 color oil moved up to 25 cents.

The downward trend in kerosene and fuel oil prices has met considerable resistance at around current levels. Demand for these oils has been only fair but sellers have either withdrawn from the market or refused to sell below the current minimum prices.

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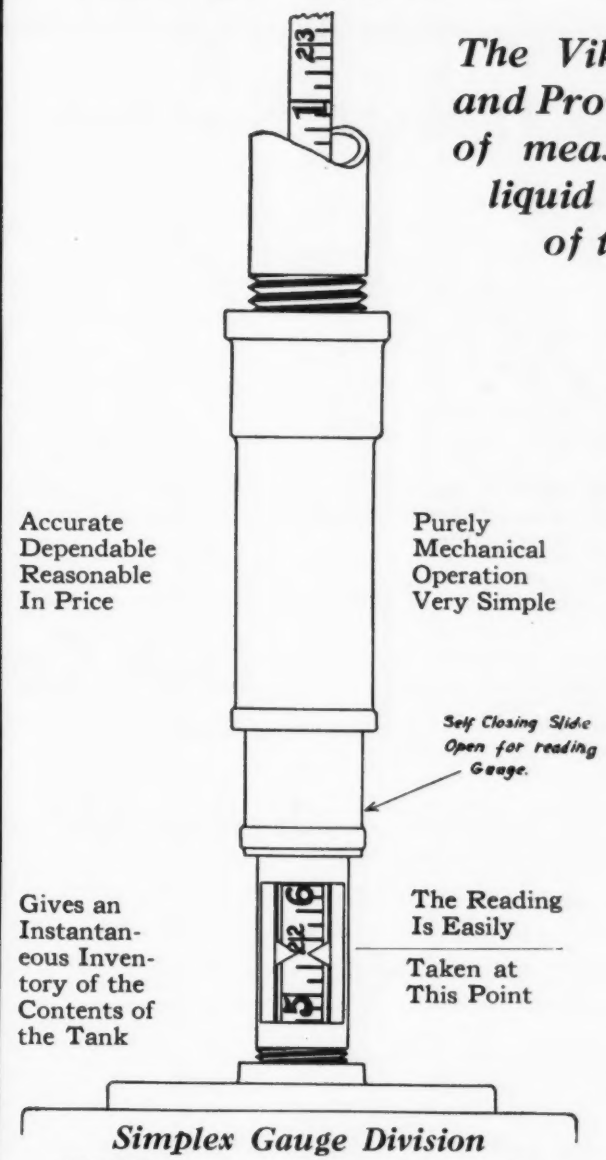

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National Petroleum News, 1213 W. Third St., Cleveland, Ohio

Eastern Domestic Markets

Gasoline Higher at New York

Staff Special

NEW YORK, July 26

U. S. MOTOR gasoline prices were higher at New York in the week just ended but lower in three other seaboard districts. Spot demand was reported good in some quarters and fair in others. A few jobbers inquired for August gasoline. Kerosene prices were lower in all districts.

Weather along the eastern seaboard has been extremely hot the last two weeks and gasoline gallonage has increased considerably, several refiners said. Yet there has not been the increase in spot orders that many expected. In some districts posted prices were being shaded. Jobbers generally, continued to evidence no desire for storing gasoline although there purchases were slightly heavier due to increased sales.

The New York market for U. S. Motor gasoline regained 0.25 cent of the 0.50 cent it lost two weeks ago. All sellers were quoting a minimum of 8.25 cents and quotations continued to range to 9 cents.

It was in this district, mainly, that orders were received for August gasoline. One seller reported he had taken several orders and refused many more. These orders taken at 8.25 cents with exception of one or two which went at 8.125 cents for resale. Orders were so numerous, he said, that he had refused to quote for longer than the first 10 days in August.

Other refiners said orders had begun to trickle in for August on which they quoted the current market. Most of them said the orders were for only a few cars. It was apparent, they said, that consumption had increased to the extent that a few jobbers were a bit more willing to store a few cars. This was true in the majority of districts.

Price cutting for tank wagon delivery has become more prevalent in the Metropolitan area. A few weeks ago refiners were delivering gasoline in Brooklyn and a part of Long Island at 8.50 cents. This has spread to include practically all of Long Island and a portion of the Bronx, sellers reported.

Spot demand for gasoline in New England was slow although contract shipments were moving out promptly. One refiner indicated that he would quote the current market for August. He had received no inquiries for the period at the end of the week.

Price cutting in the tank wagon section of the market has resulted in a reduction in the price at Providence although prices in other districts were unchanged. Refiners quoted a minimum of 9.50 cents, delivered in the Providence area, or 5 cents under the posted tank wagon price. This is a reduction of approximately 0.75 cent under prices quoted by the Standard of New York. Unconfirmed reports were that 9.50 cents was being shaded.

The New England refiner who has been quoting 8 cents f.o.b. Bayonne to his Connecticut and western Massachusetts trade, revised his price to 8.25 cents coincident with the increase to that price in the New York market.

Prices also were lower at Norfolk and Jacksonville. Demand has been good in these two districts.

Philadelphia and Baltimore prices were unchanged. Jobbers in these districts were uninterested in August purchases. A Philadelphia seller of California gasoline estimated his gallonage was 30 per cent greater than in June.

Kerosene prices at New York and Baltimore narrowed another 0.25 cent last week to 6.75 cents flat. Philadelphia prices also were off 0.25 cent to 6.50 to 6.75 cents. Demand for kerosene continued light in all districts.

Gulf Coast Markets

Bunker Oil Advances 5 Cents

Staff Special

NEW YORK, July 26

EASTERN buyers of cargo gasoline were more active at the Gulf the last week but numerous inquiries failed to develop into actual business. Prices for U. S. Motor for domestic shipment were 0.25 cent lower on the high range and kerosene prices slipped backward. The Standard of New Jersey increased its barrel prices of Bunker C fuel oil at Baton Rouge.

There were at least three eastern accounts seeking U. S. Motor gasoline at New Orleans for reasonably prompt shipment, the trade said. One of these, an industrial account, bought at 7.375 cents, c.i.f. New York, but the gasoline moved from Philadelphia and not the Gulf. The others still were in the market at the close of the week.

This competition from Philadelphia resulted in several Gulf refiners who had been quoting 7.50 cents, lowering their prices to 7.25. The low price of the range remained at 7 cents. One large refiner in the Gulf district withdrew from the market. He was uninterested in selling at the present price level.

The trade's opinion of kerosene prices was 4.875 to 5.125 cents, compared with 5 to 5.375 cents a week ago. There has been no activity in this market, opinions being based solely on prices in the Mid-Continent.

July 24, Standard of New Jersey increased the price of Bunker C fuel oil in barrels, 5 cents per barrel to $1.05 at Baton Rouge. Standard's price at New Orleans has been $1.05 for several weeks. Other companies also quoted this price at Gulf oil terminals.

Foreign buyers continued to be uninterested in Gulf markets. Some traders expect business from the other side in the near future when fall purchases are made. The general opinion is that the few foreign accounts needing spot gasoline are buying it from the Black Sea district.

•

Ajax Pump Stations Contracted

TULSA—The Ajax Pipe Line Co., subsidiary of the Standard Oil Co. of Jersey, has given contract to the Austin Co. for construction of the nine pump stations on the line now being laid from Glenpool, Okla., to Wood River, Ill.

The United States shipped abroad 14,400,000 barrels of kerosene in bulk in 1929 and 5,460,000 barrels in containers, compared with 16,290,000 barrels in bulk in 1928 and 5,560,000 barrels in containers.

Wax Markets

Activity Slackens

NEW YORK, July 26.—Activity in wax markets which caused crude scale prices to gain ground the week ended July 19, subsided in the week ended July 26. Foreign buyers still were interested in the market but at lower prices. Domestic buyers made some purchases. Generally speaking, the market moved at a slower pace and prices for all grades remained stationary.

Virtually all foreign inquiries originated in England. Accounts cabled orders for small lots of white crude scale but their ideas of the market did not keep pace with those of refiners. A week ago they purchased spot at 2.125 cents and paid 2.25 cents for deferred shipment. This past week their best bid was 2.10 cents, f.a.s. New York, and 2.05 f.a.s. the Gulf. As far as could be learned no business was placed at these prices.

One large eastern refiner was said to be buying in Pennsylvania but the majority of activity in the local market was among dealers. One account was reported to have speculated on 500 tons of white crude scale. He purchased for future shipment at 2.25 cents, traders said.

The amount of white crude scale available at 2.125 cents was rapidly being depleted but there was enough still to be a factor in the market. A dealer said he had put out bids in Pennsylvania at 2.125 cents but got few replies. Several refiners told him they were sold up for the next few months. One refiner on the seaboard quoted 2.375 cents for scale.

Fifty tons of off white wax was offered in the New York market early in the week at 2.05 cents. Offerings of specification white crude scale were made in the New Orleans market at 2.15 cents, f.a.s. ship.

Fully refined prices remained at last week levels, despite the opinion of some traders that there would be a stiffening in this section of the market. Several said prices for crude scale would have to approach more closely those of fully refined before there was an advance in the latter market.

Spot demand for higher melting points continued slow although the movement against contract was heavy.

Gulf Lubes Moving Normally

HOUSTON, July 28.—Gulf Coastal lubricant manufacturers are looking forward to August inquiries on contract requirements for zero cold test materials by jobbers this fall and winter. Meantime, spot shipments continue in line with summer motoring demand at unchanged prices.

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Complete Seaboard Market

(Export Markets for whole year given in OIL PRICE HANDBOOK. Each volume carries refinery, tank wagon, crude and export markets—complete for the whole year)

Eastern Domestic Market

(Prices for tank car lots, f. o. b. refinery or seaboard terminal, representing majority of sales and quotations. Prices shown below do not include inspection tax levied in some states.)

U. S. MOTOR GASOLINE	Prices July 28	Prices July 21	Prices July 14
New York harbor	8.25 – 9.00	8.00 – 9.00	8.00 – 9.00
Portland district	*10.30	*10.30	*10.30
Boston district	**9.50 –10.00	**9.50 –10.00	**9.50 –10.00
Providence district	**9.50 –10.20	**9.75 –10.20	**9.75 –10.20
Philadelphia district	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
Baltimore district	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
Norfolk district	8.75 – 9.00	9.00	9.00
Charleston district	9.00	9.00	9.00
Savannah district	9.00	9.00	9.00
Jacksonville district	9.00	9.00 – 9.25	9.00 – 9.25
CALIFORNIA, U. S. MOTOR GASOLINE			
New York harbor	8.50 – 9.00	8.50 – 9.00	8.50 – 9.00
Philadelphia district	8.75 – 9.00	8.75 – 9.00	8.75 – 9.00
Baltimore district	8.75 – 9.00	8.75 – 9.00	8.75 – 9.00
‡DOMESTIC AVIATION GASOLINE			
New York harbor	12.00 –13.00	12.00 –13.00	12.00 –13.00
Philadelphia	12.00	12.00	12.00
Baltimore	12.00 –12.50	12.00 –12.50	12.00 –12.50
Boston	11.50 –13.00	11.50 –13.00	11.50 –13.00

‡Prices are based on U. S. Gov't. specifications or better. Present Gov't. specifications require distillation range of 5% recovery at not more than 167°F., and not less than 122°F.; 50% recovery at 221°; 90% at 311°; 96% at 347°; end point 374° F. Gasoline of fighting grade specifications in some instances sells at a premium over domestic aviation grade. Prices represent majority of quotations.

WATER WHITE KEROSENE			
New York harbor	6.75	6.75 – 7.25	6.75 – 7.25
Philadelphia district	6.50 – 6.75	6.50 – 7.25	6.50 – 7.25
Baltimore district	6.75	6.75 – 7.25	6.75 – 7.25
GAS OIL: 28-34 Gravity			
New York harbor	4.75 – 5.25	4.75 – 5.25	4.75 – 5.25
Boston district	4.75 – 5.00	4.75 – 5.00	4.75 – 5.00
FURNACE OIL: 36-40 Gravity			
New York harbor	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
Boston district	6.00 – 6.25	6.00 – 6.25	6.00 – 6.25
GRADE C BUNKER OIL (Lighterage 5c per bbl. additional)			
New York Harbor	$1.15	$1.15	$1.15
Boston district	$1.15	$1.15	$1.15
DIESEL OIL			
New York harbor	$2.00 –$2.10	$2.00 –$2.10	$2.00 –$2.10

*Minimum delivered. †Nominal. **Delivered prices.

New York Export Market

(Lubricating oils are per gal. in bbls. F.a.s. New York)

	July 28	July 21	July 14
CYLINDER OILS (Pennsylvania Products)			
Bright stock, dark	30.50 –32.00	30.50 –32.00	28.50 –30.00
600 D filtered	26.50 –28.00	26.50 –28.00	26.50 –28.00
600 Warren E filtered	22.50 –25.00	22.50 –25.00	22.50 –24.00
600 s.r. unfiltered	17.00 –18.00	17.50 –19.00	16.50 –18.00
650 s.r. unfiltered	22.50 –24.50	23.00 –25.00	22.50 –24.00
600 flash, s.r.	24.50 –26.50	24.50 –27.00	24.00 –27.00
630 flash, s.r.	33.00 –35.00	33.00 –35.00	34.50 –35.00
RED ENGINE OILS (Vis. 100°)			
300 vis. No. 6½ color	19.00 –21.00	19.00 –21.00	19.00 –21.00
250 vis. No. 6 color	17.50 –18.50	17.50 –18.50	17.50 –18.50
200 vis. No. 6 color	16.00 –17.00	16.00 –17.00	16.00 –17.00
PALE ENGINE OILS (Vis. 100°)			
230 vis. No. 3¾ color	22.00	22.00	22.00
180 vis. No. 3¼ color	17.50 –18.00	17.50 –18.00	17.50 –18.00
100 vis. No. 2¼ color	14.25 –15.50	14.25 –15.50	14.25 –15.50
MOTOR OILS (Vis. 100°)			
600 vis. No. 7 color	30.00 –32.00	30.00 –32.00	30.00 –32.00
500 vis. No. 6½ color	27.50 –30.00	27.50 –30.00	27.50 –30.00
400 vis. No. 7¼ color	26.00 –29.00	26.00 –29.00	26.00 –29.00
300 vis. No. 6 color	22.00 –26.00	22.00 –26.00	22.00 –26.00
200 vis. No. 6 color	21.00 –23.50	21.00 –23.50	21.00 –23.50

Wax Markets

(Prices in cents per pound, A.S.T.M. tests. A.M.P. F.a.s. carload lots)

NEW YORK	July 28	July 21	July 14
124-126 Yellow crude scale	2.125	2.125	2.00 – 2.125
122-124 White crude scale	2.125– 2.25	2.125– 2.25	2.00 – 2.125
124-126 White crude scale	2.125– 2.25	2.125– 2.25	2.00 – 2.125
123-125 Fully refined	3.125	3.125	3.125
125-127 Fully refined	3.25 – 3.375	3.25 – 3.375	3.25 – 3.375
128-130 Fully refined	3.50 – 3.625	3.50 – 3.625	3.50 – 3.625
130-132 Fully refined	3.75 – 4.00	3.75 – 4.00	3.75 – 4.00
133-135 Fully refined	4.50	4.50	4.375– 4.50
135-137 Fully refined	4.75	4.75	4.75
NEW ORLEANS			
124-126 Yellow crude scale	2.125	2.125	2.00 – 2.125
122-124 White crude scale	2.125– 2.25	2.125– 2.25	2.00 – 2.125
124-126 White crude scale	2.125– 2.25	2.125– 2.25	2.00 – 2.125
123-125 Fully refined	3.125	3.125	3.125
125-127 Fully refined	3.25	3.25	3.25
128-130 Fully refined	3.50	3.50	3.50
130-132 Fully refined	3.75	3.75	3.75
133-135 Fully refined	4.375	4.375	4.375

Gulf Export Market

(Prices are f. o. b. Gulf oil terminals in Texas and Louisiana, shipments of 20,000 bbls. or more unless otherwise noted. Bulk gasoline and kerosene prices are posted quotations of the Export Petroleum Assoc., Inc., governing about 90% of the gasoline and kerosene shipped to foreign ports from the Gulf)

GASOLINE	Prices July 28	Prices July 21	Prices July 14
U. S. Motor	8.00	8.00	8.00
60-62, 400 e.p.	9.00	9.00	9.00
61-63, 390 e.p.	9.25	9.25	9.25
64 66, 375 e.p.	9.50	9.50	9.50
U. S. Motor, cases (cargoes)	$1.85	$1.85	$1.85
64-66, cases (cargoes)	$2.00	$2.00	$2.00
KEROSENE			
44 water white	7.00	7.00	7.00
41-43 prime white	6.00	6.00	6.00
Water white, cases (cargoes)	$1.75	$1.75	$1.75
Prime white, cases (cargoes)	$1.65	$1.65	$1.65
DOMESTIC GAS & BUNKER OILS			
*26-30 translucent gas oil	3.50 – 3.75	3.50 – 3.75	3.50 – 3.75
*30 plus translucent gas oil	3.75 – 4.00	3.75 – 4.00	3.75 – 4.00
Grade C bunker oil	$1.05	$1.05	$1.05
Grade C bunker oil, cargoes	$0.75 –$0.85	$0.75 –$0.85	$0.75 –$0.85

*Less than ½ of 1% sulphur.

MEXICAN CRUDE AND BUNKER OILS (f. o. b. Steamer, Tampico)			
Heavy Panuco crude taxes to be paid	$0.55 –$0.60	$0.55 –$0.60	$0.55 –$0.60
Grade C bunker oil for bunkering purposes, taxes paid	$1.00	$1.00	$1.00
SOUTH TEXAS LUBRICATING OILS (Viscosity at 100°F. cold test 0 Tanker, f. o. b. Houston)			
100 vis. No. 2 unfiltered pale	5.75 – 6.125	5.75 – 6.125	5.75 – 6.125
200 vis. No. 3 unfiltered pale	8.00 – 8.75	8.00 – 8.75	8.00 – 8.75
300 vis. No. 3 unfiltered pale	8.875– 9.50	8.875– 9.50	8.875– 9.50
500 vis. No. 3½ unfiltered pale	10.25 –11.25	10.25 –11.25	10.25 –11.25
750 vis. No. 4 unfiltered pale	12.50 –13.25	12.50 –13.25	12.50 –13.25
1200 vis. No. 5 unfiltered pale	16.00 –18.00	16.00 –18.00	16.00 –18.00
200 vis. No. 5-6 red oil	7.00 – 7.50	7.00 – 7.50	7.00 – 7.50
300 vis. No. 5-6 red oil	8.375– 8.75	8.375– 8.75	8.375– 8.75
500 vis. No. 5-6 red oil	9.25 – 9.50	9.25 – 9.50	9.25 – 9.50
750 vis. No. 5-6 red oil	11.50	11.50	11.50
1200 vis. No. 5-6 red oil	15.00 –15.50	15.00 –15.50	15.00 –15.50

Gulf Domestic Market

(Prices are f.o.b. Gulf oil terminals in Texas and Louisiana in shipments of 20,000 bbls. or more, representing sellers' opinions, for domestic shipment only.)

	July 28	July 21	July 14
U. S. Motor gasoline	7.00 – 7.25	7.00 – 7.50	7.25 – 7.50
41-43 w.w. kerosene	4.875– 5.125	5.00 – 5.375	5.00 – 5.375
*26-32 translucent gas oil	3.75 – 4.00	3.75 – 4.00	3.75 – 4.00

*Less than ½ of 1% sulphur.

Pacific Export Market

(Quotations are at seaboard, Los Angeles, in cargo lots, cents per gallon, except where otherwise noted.)

	July 28	July 21	July 14
Gasoline, U. S. Motor, 53-55 Gravity	6.50 – 7.50	6.50 – 7.50	6.50 – 7.50
Gasoline, U. S. Motor-blends and special cuts	7.25 – 8.25	7.25 – 8.25	7.25 – 8.25
Gasoline, 400 e.p. blends	8.00 – 9.25	8.25 – 9.25	8.25 – 9.25
Gas Oil, 30-34, per bbl.	$0.80 –$1.00	$0.85 –$1.00	$0.85 –$1.00
Diesel Oil, 27 plus, per bbl.	$0.80 –$0.95	$0.75 –$0.90	$0.75 –$0.90
Bunker oil, 14-18, per bbl.	$0.65 –$0.90	$0.65 –$0.90	$0.65 –$0.90
Fuel oil, 14-18 per bbl.	$0.60 –$0.85	$0.575–$0.85	$0.575–$0.85
Kerosene, 38-40 w.w., 125-150 flash, per gal.	4.50 – 5.50	4.50 – 5.50	4.50 – 5.50
Cased Goods			
Gasoline, U. S. Motor	$1.75 –$1.85	$1.75 –$1.85	$1.75 –$1.85
Gasoline, 400 e.p.	$1.85 –$2.00	$1.85 –$2.00	$1.85 –$2.00
Kerosene, 38-40 w.w., 125-150 flash	$1.45 –$1.50	$1.45 –$1.50	$1.45 –$1.50

Note: Above Pacific Export market prices for gasoline and kerosene in cargo lots apply only on goods for coastwise shipment. Gasoline and kerosene prices for shipment to foreign ports are determined as follows: Difference in freight between U. S. Gulf to European Continent and California to European Continent —this difference plus 0.125c for handling, deducted from prices posted at U. S. Gulf by the Export Petroleum Assoc., Inc., which are above prices.

Tanker Rates

(Approximate tanker freight rates to Continental ports, in shillings per ton of 2240 pounds, British sterling; to American ports, cents per barrel.)

	July 28 Crude &/or Fuel	July 28 Refined Oil &/or Spirits
Calif. to U. K. or Continental ports*	27	27
Gulf to U. K. or Continental ports*	15-17	14-16
North Atlantic to U. K. or Continental ports*	12/6-14/6	11/6-14
Calif. to North Atlantic ports (not E. of N. Y.)	$0.65–$0.70	$0.65–$0.70
Gulf to North Atlantic ports (not E. of N. Y.)**	18-20	24

*Continental ports in the range between Bordeaux and Hamburg, both inclusive. **Venezuela loading same rate. For Tampico 3c to 4c per bbl. additional.

AUTOmatic

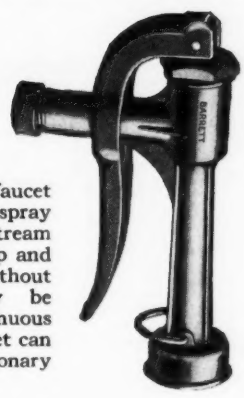
BARRETT RADIATOR FAUCETS

BARRETT Radiator faucets have proved their worth at thousands of the finest service stations all over the country. Ruggedly constructed and instantaneous in valve action, Barrett white brass, cadmium plated faucets give long life and superior performance—and at a cost far below any others of such quality.

Straight rifling in the nozzle insures a **CONCENTRATED** stream. Full flow, easy operation, and non-drip action make these new BARRETT faucets outstanding service station equipment.

All these BARRETT faucets have standard ¾" female coupling unions which will fit any ¾" male hose connection.

UTILITY and BARRETT AUTO WASH



Simple, reversible pattern screen for spray or pressure stream.

A many purpose faucet delivering either a spray or a pressure stream with the nozzle cap and a free, full flow without it. Trigger may be locked for continuous flow, and the faucet can be used as a stationary lawn spray.

Using ordinary water pressure the BARRETT Auto Wash faucet gives a high pressure stream which easily loosens dirt. It is identical with the utility faucet illustrated on the left, but does not have the trigger lock.

BARRETT white brass, cadmium plated faucets can not rust and will not break. Packing and seat washer can be easily replaced if necessary.

BARRETT faucets save their cost by saving water . . .

Manufactured by

THE CLEVELAND BRASS MANUFACTURING COMPANY

4606-4700 Hamilton Avenue — **Cleveland, Ohio**

Agents Everywhere

Tank Wagon, Service Station Markets for Gasoline and Kerosene

(OIL PRICE HANDBOOK has t.w. and s.s. markets for a whole year, arranged for quick reference)

These Prices in Effect July 28, 1930, as Posted by Principal Marketing Companies

S.O. NEW JERSEY TERRITORY

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Atlantic City, N. J.	14.5	2	16.5	18.5	13.5
Newark, N. J.	13.5	2	15.5	17.5	12.5
Annapolis	14	4	18	20	13
Baltimore, Md.	13.2	4	17.2	19.2	10.5
Cumberland, Md.	15	4	19	21	14
Washington, D. C.	13.7	2	15.7	17.7	12.7
Danville, Va.	14.8	5	19.8	21.8	13.8
Norfolk, Va.	13.3	5	18.3	20.3	11
Richmond, Va.	11.7	5	16.7	18.7	12.7
Roanoke, Va.	14	5	19	20	14
Petersburg, Va.	14.3	5	19.3	21.3	13.3
Charleston, W. Va.	14.5	4	18.5	20.5	12.5
Keyser, W. Va.	15.1	4	19.1	21.1	14.1
Parkersburg, W. Va.	13.2	4	17.2	19.2	11.2
Wheeling, W. Va.	14.4	4	18.4	20.4	12.4
Charlotte, N. C.	15.3	5	20.3	20.3	14.3
Hickory, N. C.	15.6	5	20.6	22.6	14.6
Mt. Airy, N. C.	15.5	5	20.5	22.5	14.5
Salisbury, N. C.	15.5	5	20.5	20.5	14.5
Charleston, S. C.	13.3	6	19.3	21.3	12.3
Columbia, S. C.	15.2	6	21.2	23.2	14.2

Note: 2c per gallon discount off t.w. price of gasoline to dealers and commercial consumers thru S. O. New Jersey territory.

CONTINENTAL OIL

Denver, Colo.	12	4	16	19	15.5
Pueblo, Colo.	13	4	17	20	15.5
Grand Junc., Colo.	17.5	4	21.5	24.5	19
Casper, Wyo.	15	4	19	22	14
Cheyenne, Wyo.	16.5	4	20.5	23.5	15.5
Butte, Mont.	19.5	5	24.5	*23	20
Helena, Mont.	19.5	5	24.5	27.5	20
Salt Lake City, Utah.	16.5	3½	20	23	17
Boise, Ida.	18.5	5	23.5	26.5	19
Twin Falls, Ida.	18.5	5	23.5	27.5	19
Albuquerque, N. M.	11	5	16	20	15

*4½c discount to dealers at Butte.

S. O. CALIFORNIA

	Gasoline Tax	Posted Retail Price	Wholesale	Oil T.W.
Phoenix, Ariz.	4	17	20	20
Los Angeles, Cal.	3	19.5	21.5	15.5
Fresno, Cal.	3	20	22	17
San Francisco, Cal.	3	20	22	15.5
Reno, Nev.	4	25	27	19
Portland, Ore.	4	21.5	23.5	16.5
Seattle, Wash.	3	20.5	22.5	16.5
Spokane, Wash.	3	24.5	26.5	20.5
Tacoma, Wash.	3	20.5	22.5	16.5

Note: 6c per gal. discount to dealers off posted wholesale price of gasoline to customers taking tank truck delivery, thru S. O. California territory except 1c discount at Phoenix to dealers only. This discount determines net t.w. price.

S. O. LOUISIANA

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Little Rock, Ark.	12	5	17	17	12
Alexandria, La.	12.5	*5	17.5	18	†13
Baton Rouge, La.	11.5	4	15.5	16	†13
Lake Charles, La.	12.5	*5	17.5	18	†13
New Orleans, La.	9.5	*5	14.5	14.5	†12
Shreveport, La.	11.5	4	15.5	17.5	†13
Lafayette, La.	12.5	*5	17.5	18	†13
Bristol, Tenn.	14.5	5	19.5	21.5	14
Chattanooga, Tenn.	14.5	5	19.5	20	13
Knoxville, Tenn.	14.5	5	19.5	21.5	15
Nashville, Tenn.	13.5	5	18.5	19	15
Memphis, Tenn.	12.5	5	17.5	19.5	12.5

Note: 2c per gallon discount off t.w. price of gasoline to dealers thru S. O. Louisiana territory.

*Lake Charles, Alexandria, New Orleans and Lafayette gasoline tax includes 4c state tax and 1c parish tax. New Orleans kerosene price includes 1c parish tax in addition to 1c state tax.

†Kerosene price in Louisiana includes 1c state tax.

S. O. KENTUCKY

Ashland, Ky.	14	5	19	21	15
Catlettsburg, Ky.	14	5	19	21	15
Lexington, Ky.	14	5	19	20	14.5
Louisville, Ky.	13	5	18	20	13
Covington, Ky.	16	5	21	22	14.5
Clarksdale, Miss.	14	5	19	21	12.5
Gulfport, Miss.††	15.5	5	20.5	22.5	13
Jackson, Miss.	14	5	19	21	13
Natchez, Miss.	14	5	19	21	13
Vicksburg, Miss.	14	5	19	21	13
Birmingham, Ala.‡‡	14	4	18	20	14.5
Mobile, Ala.‡	14	4	18	18	13.5
Montgomery, Ala.*	15	4	19	21	15
Atlanta, Ga.	13	6	19	21	†15.5

Latest Changes in Tank Wagon Prices

Gasoline

S. O. New Jersey—S. s. only cut 2c, Salisbury, to 20.5c, same as t. w., **July 23.**

S. O. Ohio—T. w. cut 1c, s. s. 2c, Butler county, both to 19c, **July 24.**

T. w. up 1c, s.s. 2c, Muskingum and Perry counties, to statewide prices of 20c and 21c, **July 26.**

Continental Oil—T. w. and s. s. up 2c, Boise, to 23.5c and 26.5c, **July 14.**

S. O. Louisiana—T. w. and s. s. cut ½c thru Louisiana and Arkansas, **July 19,** and thru Tennessee, **July 21.** Exceptions: Little Rock and New Orleans unchanged; s. s. unchanged at Alexandria, Baton Rouge, Lafayette, Lake Charles and Chattanooga; and s. s. cut 2c at Nashville.

Kerosene

S. O. Louisiana—Kerosene cut 1c throughout Louisiana, Arkansas and Tennessee, **July 17.** Exceptions: kerosene unchanged at New Orleans, Memphis, Chattanooga and Bristol.

	Gasoline T.W.	Tax	Total T.W.	S.S.	Oil T.W.
Augusta, Ga.	16	6	22	24	†15.5
Macon, Ga.	14	6	20	22	†14
Savannah, Ga.	14	6	20	22	†14
Jacksonville, Fla.	14	6	20	21	14
Miami, Fla.	15	6	21	23	14
Tampa, Fla.	14	6	20	22	13
Pensacola, Fla.**	13	6	19	19	13.5

Note: Net price of gasoline to dealers is 2c under posted t.w. price thru S. O. Kentucky territory.

*Local privilege tax of 1 cent on gasoline and ½ cent on kerosene at Montgomery included.

†Georgia kerosene prices include 1c state tax.

**Both tank wagon prices include 1c city tax at Pensacola which went into effect Oct. 15, 1926.

††Both tank wagon prices at Gulfport include Harrison county privilege tax of 2c.

‡Mobile gasoline prices include 1c city tax.

‡‡Birmingham gasoline prices include 1c city tax.

S. O. NEBRASKA

Omaha, Neb.	15.25	4	19.25	21.25	13.25
McCook	16.75	4	20.75	22.75	14.75
Norfolk	15.75	4	19.75	21.75	13.75
North Platte	16.75	4	20.75	22.75	14.50
Scottsbluff	16.75	4	20.75	22.75	14.25

Note: Discounts: 1c per gal. off tank wagon price of gasoline for 1,000 gallon dumps per month to consumers taking tank wagon delivery only.

S. O. INDIANA

Chicago, Ill.	15	3	18	19	13
Decatur, Ill.	15.2	3	18.2	19.2	13.1
E. St. Louis, Ill.	14.4	3	17.4	18.4	12.2
Joliet, Ill.	15.4	3	18.4	19.4	13.3
Peoria, Ill.	15.2	3	18.2	19.2	13.1
Quincy, Ill.	15.2	3	18.2	19.2	12.9
Indianapolis, Ind.	15.2	4	19.2	20.2	14.2
Evansville, Ind.	15	4	19	20	14
South Bend, Ind.	15.4	4	19.4	20.4	14.4
Detroit, Mich.	15.8	3	18.8	19.8	14.7
Grand Rapids, Mich.	15.7	3	18.7	19.7	14.6
Saginaw, Mich.	15.9	3	18.9	19.9	14.8
Green Bay, Wisc.	15.6	2	17.6	18.6	13.4
Madison, Wisc.	15.3	2	17.3	18.3	13.1
Milwaukee, Wisc.	15.1	2	17.1	18.1	12.9
La Cross, Wisc.	16.2	2	18.2	19.2	14
Minneapolis, Minn.	16.2	3	19.2	20.2	13.9
Duluth, Minn.	16.5	3	19.5	20.5	13.9
Mankato, Minn.	16.1	3	19.1	20.1	13.7
Des Moines, Ia.	15.5	3	18.5	19.5	13.3
Davenport, Ia.	15.5	3	18.5	19.5	13.3
Sioux City, Ia.	15.1	3	18.1	19.1	12.9
Mason City, Ia.	15.5	3	18.5	19.5	13.3
St. Louis, Mo.	*14.9	2	16.9	17.9	12.3
Kansas City, Mo.	†15.9	2	17.9	18.9	11.6
St. Joseph, Mo.	†15.5	2	17.5	18.5	12.2
Fargo, N. D.	17.9	3	20.9	21.9	15.9
Grand Forks, N. D.	18.2	3	21.2	22.2	16.2
Minot, N. D.	17.9	3	20.9	21.9	15.9
Pierre, S. D.	16	4	20	21	14.4
Huron, S. D.	16.3	4	20.3	21.3	14.7
Wichita, Kans.	13.8	3	16.8	14.8	11.8
Bartlesville, Okla.	13.5	4	17.5	20.5	11.5

S. O. Indiana's quantity contract price schedule thru territory (except in Chicago and Detroit, which see below) on tank truck deliveries of gasoline, figured from the service station price is 2c for 500 gal. or more a month; 2½c for 2,000 gals. or more a month; 3c for 6,000 gals. or more a month; and 4½c for 75,000 gals. or more a month.

In Chicago and vicinity, these discounts apply: Over 500 gals. per month, 4c per gal. off service station price; over 1,000 gals. per month, 5c per gal. off service station price.

In Detroit, dealers and consumers signing contract for all gasoline for one year, get 4c per gal. off s.s. price. Non-contracted accounts get 3c off s.s. price. Those buying 75,000 gals. or more a month, 4½c per gal. off s.s. price.

*Includes city tax of ½c.

†Includes city tax of 1c.

S. O. OHIO

Ohio State wide	16	4	20	21	†14
Allen, Butler, Franklin, Hancock, and Preble Counties:	15	4	19	19	14

Note: Discount to dealers and commercial accounts generally thru Ohio is 2c per gal. off t.w. price with some exceptions. In counties where prices are below normal, discount is 3c per gal. off t.w. price.

†Kerosene t.w. price in Paulding County is 12c; in Allen and Van Wert Counties, 13c.

MAGNOLIA PETROLEUM

Muskogee, Okla.	12	4	16	19	9
Oklahoma City	11	4	15	18	10
Tulsa, Okla.	12	4	16	20	10
Fort Smith, Ark.†	10	†4	14	15	12
Little Rock, Ark.	12	5	17	17	12
Texarkana, Ark.*	13	4	17	17	12
Dallas, Tex.	10	4	14	18	12
Fort Worth, Tex.	10	4	14	17	11
Houston, Tex.	11	4	15	19	11
San Antonio, Tex.	9	4	13	17	11
El Paso, Tex.	12	4	16	20	13

*Within city of Texarkana, the state tax on gasoline is 4c per gal. conforming with the Texas state tax. In this district outside of the city the 5c Arkansas tax applies.

†Within city of Fort Smith, Oklahoma tax of 4c applies. In this district outside of the city, the 5c Arkansas tax applies.

S. O. NEW YORK

Due to local price conditions at many points in S. O. New York territory, actual prices on both gasoline and kerosene are being made at under the posted tank wagon prices published below.

Greater New York City: Boroughs of Manhattan, Bronx, Queens & Kings	14.3	2	16.3	18.3	11.3
Borough of Richmond	14.7	2	16.7	18.7	11.7
Albany, N. Y.	15.6	2	17.6	19.6	12.6
Buffalo, N. Y.	14.8	2	16.8	18.8	11.8
Rochester, N. Y.	15	2	17	19	12
Syracuse, N. Y.	15.8	2	17.8	19.8	12.8
Boston, Mass.	14.5	2	16.5	18.5	11.5
Augusta, Me.	15.8	4	19.8	21.8	12.8
Manchester, N. H.	15.4	4	19.4	21.4	12.4
Burlington, Vt.	16.3	4	20.3	22.3	13.3
New Haven, Conn.	15.6	2	17.6	19.6	12.6
Providence, R. I.	14.7	2	16.7	18.7	11.7

Note: S. O. New York allows 3c off t.w. price to dealers in New York City, and 2c off t.w. price thru rest of territory.

Above prices include these inspection fees on both gasoline and kerosene, per gallon: Alabama, 1/40c on gasoline, 1/2c kerosene; Arkansas, 1/20c on both; Florida, 1/8c on both; Illinois, 3/100c on both; Indiana, 4/25c to 1/2c on both; Kansas, 3/50c on both; Louisiana, 1/32c on gasoline; Minnesota, 3/50c on both; Missouri, 3/10c to 1/2c on both; Nebraska, 3/100c on both; North Carolina, 1/4c on both; North Dakota, 1/20c on both; Oklahoma, 4/25c on both; South Carolina, 1/8c on both; South Dakota, 1/10c on both; Tennessee, 2/5c on gasoline and 1/2c to 4/5c on kerosene; Wisconsin, 3/50c on both.

Kerosene inspection fees only, per gallon: Iowa 7/100c; Michigan 1/5c to 4/5c per gal.

Tank Wagon, Service Station Markets for Gasoline and Kerosene

Prices in Effect July 28, 1930

ATLANTIC REFINING

	Gasoline T.W.	Tax	Gasoline Total T.W.	S.S.	Oil T.W.
Pittsburgh, Pa.	16	*	16	21	13
Philadelphia, Pa.	16	*	16	21	13
Allentown, Pa.	16	*	16	21	13
Erie, Pa.	15	*	15	18	13
Scranton, Pa.	16	*	16	21	13
Altoona, Pa.	16	*	16	21	13
Dover, Del.	16	3	19	21	13
Wilmington, Del.	16	3	19	21	13
Boston, Mass.	14.5	2	16.5	18.5	11.5
Springfield, Mass.	15.5	2	17.5	19.5	12.5
Worcester, Mass.	15.3	2	17.3	19.3	12.3
Fall River, Mass.	14.1	2	16.1	17.1	12.1
Providence, R. I.	14.7	2	16.7	18.7	11.7
Hartford, Conn.	15.5	2	17.5	19.5	12.5
New Haven, Conn.	15.6	2	17.6	19.6	12.6
Atlantic City, N. J.	14.5	2	16.5	18.5	13.5
Camden, N. J.	13.6	2	15.6	17.6	12.6
Trenton, N. J.	14	2	16	18	13
Annapolis, Md.	14	4	18	20	13
Baltimore, Md.	13.2	4	17.2	19.2	10.5
Hagerstown, Md.	14.7	4	18.7	20.7	13.7
Richmond, Va.	13.7	5	18.7	20.7	12.7
Wilmington, N. C.	13.4	5	18.4	20.4	12.4
Brunswick, Ga.	15	6	21	23	**15
Jacksonville, Fla.	14	6	20	21	14

Note: 2c per gal. discount off t.w. price of gasoline on sales to dealers; discount to commercial accounts under contract for one year in accordance with Code of Ethics. Erie has dealer discount of 4c off t.w. price, effective May 28.

*3-cent state tax is collected by retail dealer and paid by him directly to state.

**Georgia kerosene prices include 1c state tax.

V. M. & P. NAPHTHA

(Changes ordinarily occur coincident with gasoline price changes)

	Oleum Sprits	V.M.&P. Naphtha	Cleaner Naphtha
Chicago	14.7	16.7	17
Detroit	17.4	18.9	20.7
Kansas City	†15.9	†17.4	†19.2
Milwaukee	16.4	*19.9	*21.7
Minneapolis	**20.7	**22.2	**24
St. Louis	13.9	17.1	18.9
New York		16	23
Boston		19	23

*Includes 2c state tax. †Includes 1c city tax.
**Includes 3c state tax.

Petroleum Spirits (Solvent)

Tank Cars (F.o.b. refinery or seaboard terminal)

New York harbor	11.00
Philadelphia district	11.00
Providence	11.50

Tank Wagon or Steel Barrels

New York City	15
Syracuse	17–18
Rochester	18
Buffalo	17–18
Providence	19
Boston	19
Bridgeport	16–18
Newark	16–18
Philadelphia	16–17
Baltimore	18

Note: 2c off above t.w. prices to large buyers in some instances.

CANADA

(Per Imperial Gallon, which is 1.2 American Gallons)

	Gasoline T.W.	Tax	Gasoline Total T.W.	S.S.	Oil T.W.
ONTARIO					
Toronto	19.5	5	24.5	28	20.5
Ottawa	19.5	5	24.5	28	20.5
North Bay	22.5	5	27.5	33	27
Ft. William	22.5	5	27.5	31	22.5
Border Cities, including Windsor	18.5	5	23.5	27	19.5
MANITOBA					
Winnipeg	21	5	26	30	21.5
SASKATCHEWAN					
Regina	26	5	31	35	26
ALBERTA					
Edmonton	27.5	5	32.5	36	27.5
Calgary	23.5	5	28.5	32	23.5
BRITISH COLUMBIA					
Vancouver	23	5	28	32	24
QUEBEC					
Montreal	20.5	5	25.5	29	21.5
Quebec City	21.5	5	26.5	30	22 5
Three Rivers	21.5	5	26.5	30	22.5
NEW BRUNSWICK					
St. John	20	5	25	29	22
Moncton	20	5	25	29	22
NOVA SCOTIA					
Halifax	20	5	25	29	22

PRINCE EDWARD ISLAND

	Gasoline T.W.	Tax	Gasoline Total T.W.	S.S.	Oil T.W.
Charlottetown	20	5	25	29	22

Note: In districts surrounding these points 1c additional is added to city price.

Aviation Gasoline Prices

Following are tank wagon prices of aviation gasoline in principal marketing territories showing state and municipal taxes:

S. O. NEW JERSEY

Prices in Effect July 28, 1930

	T.W	Tax	Total
Newark, N. J.	17.4	*	17.4
Baltimore, Md.	16.2	4	20.2
Washington, D. C.†	19.5	2	21.5

*New Jersey road tax of 2c does not apply on aviation gasoline, exemption being claimed at time of purchase.

†Price at Washington is on Stanavo Aviation gasoline which sells at a 2c premium over "Standard" aviation gasoline.

S. O. OHIO

Thru Ohio	17	4	21

Discounts given by S. O. Ohio: For airport delivery only: 2,000 gals. or over per month, 1c per gal.; 6,000 gals. or over per month, 2c; 12,000 gals. and over per month, 3c.

S. O. INDIANA

Chicago	17	3	20
Indianapolis, Ind.	17.2	4	21.2
Detroit, Mich.	17.8	3	20.8
Milwaukee, Wis.	17.1	2	19.1
Minneapolis, Minn.	18.2	3	21.2
St. Louis, Mo.	16.4	2½	18.9
Kansas City, Mo.	16.9	3	19.9
Fargo, N. D.	19.9	3	22.9
Huron, S. D.	18.3	4	22.3
Wichita, Kan.	15.8	3	18.8

In S. O. Indiana territory, buyer pays state and city taxes on aviation gasoline, and if he can get a refund from the state, he does so. St. Louis tax of 2½c includes ½c city tax and Kansas City tax includes 1c city tax.

S. O. LOUISIANA

New Orleans, La.	16	5	21
Nashville, Tenn.	18	5	23
Memphis, Tenn.	17	5	22

2c per gal. discount off above t.w. prices to dealers and commercial consumers.

S. O. NEBRASKA

Omaha	18.25	4	22.25

2c per gal. refund to resellers.

CONTINENTAL OIL CO.

*Denver, Col.	15	4	19
Cheyenne, Wyo.	19.5	4	23.5
Helena, Mont.	25.5	5	30.5
Salt Lake City, Utah.	19.5	3.5	23
†Albuquerque, N. M.	19	5	24
Boise, Ida.	19.5	5	24.5

*1c per gal. discount to dealers at Denver. †2c per gal. discount to dealers at Albuquerque.

S. O. CALIFORNIA

Phoenix, Ariz.	17	4	21
Los Angeles, Cal.	19.5	3	22.5
San Francisco, Cal.	20	3	23
Reno, Nev.	24	4	28
Portland, Ore.	19.5	4	23.5
Seattle, Wash.	19.5	3	22.5
Spokane, Wash.	23.5	3	26.5

4c per gal. discount off t.w. price of gasoline to customers taking tank truck delivery, through S. O. California territory, except 1c discount at Phoenix.

Imports of gasoline by France, which had dropped to 2,182,700 barrels in 1928, rose to 15,738,000 barrels in 1929. In 1927 she imported 10,244,000 barrels.

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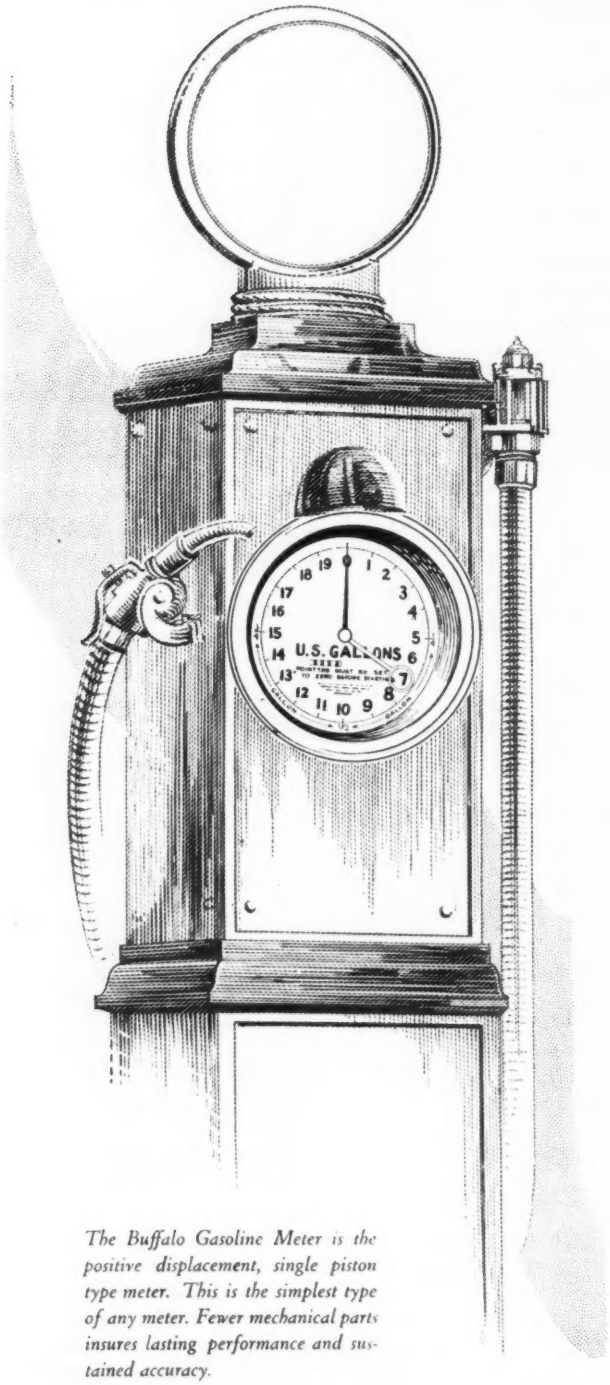

The Buffalo Gasoline Meter is the positive displacement, single piston type meter. This is the simplest type of any meter. Fewer mechanical parts insures lasting performance and sustained accuracy.

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THE honest face of the Buffalo Gasoline Meter...inspires accurate service at the pump. And motorist customers know that this meter *never cheats.*

Recent exhaustive tests by leading purchasers of gasoline pumping equipment have proved, beyond a shadow of a doubt, the reliability, accuracy and long life of the mechanical parts that form the internal workings of the Buffalo Gasoline Meter. The unbiased recommendation, by large users of this meter, is your guarantee of a lifetime of service and satisfaction.

So much smoke has been raised with reference to the relative merits of this or that meter, that it is a fine thing to have the unbiased reports of actual tests conducted in an impartial manner on Buffalo Gasoline Meters, in open competition with many other makes. These tests prove conclusively the leadership of Buffalo Gasoline Meters.

Realizing that you probably have no facilities for conducting your own tests on gasoline meters, we invite you to have your secretary send for a copy of the new Buffalo Gasoline Meter Book, entitled.."Buffalo Gasoline Meters Overcome Competition." Gladly will this book be sent you by return mail entirely without obligation.

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BUFFALO GASOLINE METERS
TRADE MARK REG U S PAT OFF

Crude Oil Prices (in Effect July 28, 1930)

(Crude prices for the whole year in OIL PRICE HANDBOOK published annually)

EASTERN FIELDS

(Posted by Joseph Seep Purchasing Agency)

(All Penna. Grade Crude Effective July 11, 1930)

Bradford crude in Bradford Transit Co. and New York Transit lines	$2.10
Bradford—Alleghany district (posted by Tide Water Pipe Co., Ltd.)	2.10
Penna. Grade Oil in National Transit Lines (Other Pennsylvania)	*2.05
Penna. Grade Oil in Southwest Penna. Pipe Lines (Other Pennsylvania)	2.00
Penna. Grade Oil in Eureka Pipe Lines (West Virginia)	1.90
Penna. Grade Oil in Buckeye Pipe Lines (Macksburg, O. district)	1.75
Wayne district crude in Cumberland lines (West Virginia) (Effective July 23, 1930)	1.17
Corning Grade in Buckeye Pipe Lines (Ohio) (Effective July 19, 1930)	1.50
Somerset Oil in Cumberland Pipe Lines (Kentucky) (Effective July 23, 1930)	1.30
Somerset Oil in Eureka Pipe Lines (Effective July 23, 1930)	1.14
Ragland Grade in Cumberland Pipe Lines (Kentucky) (Effective Jan. 29, 1929)	$0.60

*Oil run prior to July 1, 1929 is $2.00 per bbl.

(Posted by Stoll Oil Refining Co.)

Oil City, Ky., oil in Stoll lines (Effective July 25, 1930)	$1.35

MICHIGAN

(Posted by Dixie Oil Co.)

Traverse and Dundee (Muskegon), effective April 16, 1930, same gravity and price schedule as Prairie posts in Oklahoma and Kansas, which see below.

(Posted by Pure Oil Co.)

Midland, Midland County (July 19, 1930)	$1.45

CENTRAL STATES FIELDS

Posted by Ohio Oil Co.

Wooster	$1.70	Princeton	$1.65
Lima	1.55	Illinois	1.65
Waterloo	1.20	Plymouth	1.23
Indiana	1.32	West Kentucky	1.55

CANADIAN CRUDE

Posted by Imperial Oil Refineries, Ltd.

Petrolia	$1.95
Oil Springs	2.02

OKLAHOMA, KANSAS and NORTH TEXAS

Prices of Prairie Oil & Gas Co.

(In Oklahoma and Kansas)

Effective Apr. 10, 1930

Below 25	$0.75	35-35.9	$1.255
25-25.9	0.80	36-36.9	1.29
26-26.9	0.85	37-37.9	1.325
27-27.9	0.90	38-38.9	1.36
28-28.9	0.95	39-39.9	1.395
29-29.9	1.00	40-40.9	1.43
30-30.9	1.05	41-41.9	1.465
31-31.9	1.10	42-42.9	1.50
32-32.9	1.15	43-43.9	1.535
33-33.9	1.185	44 and above	1.57
34-34.9	1.22		

(In North Texas: Ranger, Wichita Falls, Mexia)

Effective Apr. 10, 1930

Below 25	$0.72	30-30.9	$1.02
25-25.9	0.77	31-31.9	1.07
26-26.9	0.82	32-32.9	1.12
27-27.9	0.87	33-33.9	1.17
28-28.9	0.92	34-34.9	1.22
29-29.9	0.97	35-35.9	1.255
36-36.9	$1.29	41-41.9	$1.465
37-37.9	1.325	42-42.9	1.50
38-38.9	1.36	43-43.9	1.535
39-39.9	1.395	44 and above	1.57
40-40.9	1.43		

The Texas Co., same schedule in Oklahoma as Prairie in Oklahoma; and in North Texas, North Central Texas and Central Texas same as Prairie and Humble in North Texas, effective Apr. 10.

Humble Oil & Refining Co. Prices

(Ranger, North Texas, Mexia, Powell, Boggy Creek, Richland, Wortham, Lytton Springs, Currie, Moran and Nocona crudes all in Texas.)

Humble's prices in above fields same as Prairie's prices in North Texas, effective Apr. 10, which see.

Magnolia Petroleum Co.

(In Oklahoma, Kansas and North and East Central Texas)

Below 26	$0.70	28-28.9	$0.88
26-26.9	0.76	29-29.9	0.95
27-27.9	0.82	30-30.9	1.02

Rest of Magnolia schedule up to 44 and above same as Prairie in Oklahoma and Kansas.

Apr. 10, 1930, Glasscock, Crane, Upton, Winkler, Howard and Mitchell Counties same prices as Humble's postings in Winkler, Crane, etc., which see

Corsicana heavy	$0.80
Luling	0.85
Mirando	0.85
Darst Creek, 60° F. gravity	1.15

Carter Oil Co.

(Oklahoma and Kansas)

Apr. 10, 1930, same schedule as Prairie, which see.

PANHANDLE TEXAS

Humble Oil & Refining Co.

Effective Apr. 10, 1930

Hutchinson and Carson Counties:

Below 32	$0.775	38-38.9	$1.065
32-32.9	0.825	39-39.9	1.10
33-33.9	0.875	40-40.9	1.135
34-34.9	0.925	41-41.9	1.17
35-35.9	0.96	42-42.9	1.205
36-36.9	0.995	43-43.9	1.24
37-37.9	1.03	44 and above	1.275

Gray County:

Below 29	$0.755	37-37.9	$1.16
29-29.9	0.805	38-38.9	1.195
30-30.9	0.855	39-39.9	1.23
31-31.9	0.905	40-40.9	1.265
32-32.9	0.955	41-41.9	1.30
33-33.9	1.005	42-42.9	1.335
34-34.9	1.055	43-43.9	1.37
35-35.9	1.09	44 and above	1.405
36-36.9	1.125		

Wheeler County: Posted by Magnolia Pet. Co. Humble withdrew Wheeler county postings Apr. 10.

Below 30	$0.755	37-37.9	$1.11
30-30.9	0.805	38-38.9	1.145
31-31.9	0.855	39-39.9	1.18
32-32.9	0.905	40-40.9	1.215
33-33.9	0.955	41-41.9	1.25
34-34.9	1.005	42-42.9	1.285
35-35.9	1.04	43-43.9	1.32
36-36.9	1.075	44 and above	1.355

Above prices met by The Texas Co. and Magnolia on Apr. 10.

WEST TEXAS AND NEW MEXICO

Humble Oil & Refining Co.

Effective Apr. 10, 1930

Winkler, Crane, Upton, Crockett, Ector, and Pecos Counties, also Lea County, N. Mex.

Below 25	$0.65	31-31.9	$0.86
25-25.9	0.68	32-32.9	0.89
26-26.9	0.71	33-33.9	0.92
27-27.9	0.74	34-34.9	0.95
28-28.9	0.77	35-35.9	0.98
29-29.9	0.80	36 and above	1.01
30-30.9	0.83		

Howard and Glasscock counties:

Effective Apr. 10, 1930

Below 25	$0.65	31-31.9	$0.82
25-25.9	0.68	32-32.9	0.84
26-26.9	0.71	33-33.9	0.86
27-27.9	0.74	34-34.9	0.88
28-28.9	0.76	35-35.9	0.90
29-29.9	0.78	36 and above	0.92
30-30.9	0.80		

Apr. 10, 1930, The Texas Co. posted same prices in Crane, Upton, Winkler and Lea counties as Humble.

SOUTH AND SOUTHWEST TEXAS

(Posted by Humble Oil & Refining Co.)

Effective Apr. 10, 1930

Mirando	$0.85
Salt Flat	1.15
Darst Creek	1.15
Pettus, Bee County	1.40

NORTH LOUISIANA—ARKANSAS FIELDS

Prices of Standard Oil Co. of Louisiana

Caddo, Homer, Haynesville, Bull Bayou, El Dorado, Crichton, De Soto, and Sabine.

Effective Apr. 11, 1930

Below 28	$0.87	36-36.9	$1.29
28-28.9	0.92	37-37.9	1.325
29-29.9	0.97	38-38.9	1.36
30-30.9	1.02	39-39.9	1.395
31-31.9	1.07	40-40.9	1.43
32-32.9	1.12	41-41.9	1.465
33-33.9	1.17	42-42.9	1.50
34-34.9	1.22	43-43.9	1.535
35-35.9	1.255	44 and above	1.57

Cotton Valley, Sarepta and Carterville below 36 gravity, $0.85. Rest of schedule same as Caddo, Homer, etc.

Smackover, below 24	$0.90
do 24 and above	1.05
Bellevue (Apr. 11, 1930)	1.15
*Urania, La. (Apr. 11, 1930)	0.95
†East El Dorado (Calion) (Apr. 11, 1930)	0.90

*Posted by Louisiana Oil Refining Corp.

†Posted by Magnolia Petroleum Co.

Apr. 10, 1930, The Texas Co. same schedule in Louisiana as Standard, plus these grades: 24-24.9, $0.67; 25-25.9, $0.72; 26-26.9, $0.77; 27-27.9, $0.82.

Apr. 11, Magnolia met Standard schedule in Louisiana-Arkansas fields.

STEPHENS, ARKANSAS

Lousiana Oil Refining Corp., and Atlantic Oil Producing Co.

Effective Apr. 11, 1930

Below 28	$0.76	30-30.9	$0.91
28-28.9	0.81	31-31.9	0.96
29-29.9	0.86	32 and above	1.01

GULF COASTAL

Posted by Humble Oil & Refining Co.

Effective Apr .10, 1930

Grades A	$1.15	34-34.9	$1.30
Grades B:		35-35.9	1.33
Below 25	1.00	36-36.9	1.36
25-25.9	1.03	37-37.9	1.39
26-26.9	1.06	38-38.9	1.42
27-27.9	1.09	39-39.9	1.44
28-28.9	1.12	40-40.9	1.46
29-29.9	1.15	41-41.9	1.48
30-30.9	1.18	42-42.9	1.50
31-31.9	1.21	43-43.9	1.52
32-32.9	1.24	44 and above	1.54
33-33.9	1.27		

Refugio county	(rest of schedule, same as Grades B, which see above).
Below 25	$0.85
25-25.9	1.03

Fields classified as A and B are Spindletop, Goose Creek, Hull, Liberty, Sour Lake, West Columbia, Orange, Boling, Humble, Pierce Junction, Sugarland and Raccoon Bend. All other fields are Grades A only.

Specifications for Grade "A" crude: Gravity: 25° and below, at 60° F; Viscosity: not less than 100 seconds at 100° F Saybolt.

Sulfur: not over .4%.

Grade "B" includes all Coastal crude which does not meet the test for "A" grades.

Crude Price Changes

OIL CITY.—On July 23 Joseph Seep Purchasing Agency reduced both grades of Somerset crude and Wayne district crudes 17 cents per barrel, making new prices:

Somerset in Cumberland lines, $1.30; Somerset in Eureka lines, $1.14; and Wayne district, $1.17 per barrel at wells.

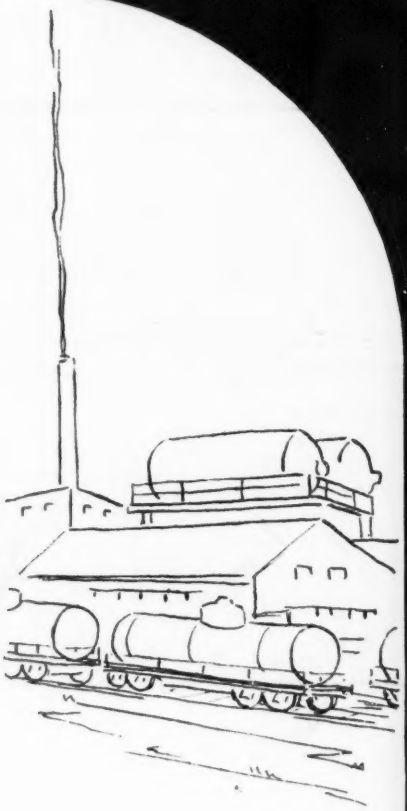
Last previous change on Somerset and Wayne crudes was a 10 cent advance on April 11.

LOUISVILLE.—On July 25 Stoll Oil Refining Co. reduced Oil City, Ky. crude 20 cents, making new price $1.35 per barrel.

Oil Men Featured in Magazine

HOUSTON.—J. B. Russ, president of the Consolidated Oil Co. here, and head of the Texas Petroleum Marketers Association, occupies a prominent position in July edition of the Texas Commercial News.

His ideas on cooperation, the value of trade associations and how they work in the oil industry, lead off the issue. Mr. Russ points out particularly the reasons for the organization of the Texas association and tells of marketing code adopted by oil marketers through the country.



This is the Light Gauge Barrel, with extra corrugations, for liquids with a flash point above 80°F. P. I. W. Barrels include all the standard sizes in both Light Gauge and I. C. C. types, along with special barrels for solids and semi-solids. Finishes include hot-dip galvanizing or tinning; baked enamel in any color combination, or head and shell decoration with your trade-mark or slogan.

P.I.W.
STEEL BARRELS

The PETROLEUM IRON WORKS Co.
SHARON, PENNA.
NEW YORK CHICAGO TULSA

Crude Oil Prices (in Effect July 28, 1930)

(Prices are per barrel at the well)

(Crude Oil Prices for the whole year in OIL PRICE HANDBOOK published annually)

GULF COASTAL

Prices of The Texas Co.

Effective Apr. 10, 1930

Grades A.....$1.15 *Grades B.....$1.00

*Grades B include all heavy crudes which do not meet tests for Grades A or for Grades B light crude. Prices for Grades B light crude are the same as Humble's, which see.

ROCKY MOUNTAIN FIELDS

Prices of Ohio Oil Co., and Midwest Refining Co.

(Salt Creek prices effective Apr. 10, 1930)

‡Salt Creek 29–29.9	$1.00
" " 30–30.9	1.05
" " 31–31.9	1.10
" " 32–32.9	1.15
" " 33–33.9	1.185
" " 34–34.9	1.22
" " 35–35.9	1.255
" " 36–36.9	1.29
" " 37 and above	1.325
Elk Basin	1.55
Grass Creek light	$1.55
Big Muddy	1.38
Lance Creek	1.63
Rock Creek	1.35
Mule Creek	1.20
Rex Lake	1.10
‡Osage	1.63
‡Cat Creek, Mont.	1.55
Sunburst, Mont.	1.65
‡Hogback, N. Mex.	1.40
Artesia, N. Mex.	1.05

‡Posted by Midwest Refining Co. Midwest also buys Grass Creek light and Elk Basin.

CALIFORNIA

Standard Oil Co. of California

(Effective March 11, 1930)

Gravity	Signal Hill Seal Beach Alamitos Heights Huntington Beach Inglewood* Olinda-Brea Canon*	Athens Rosecrans Dominguez	Elwood Terrace	Torrance Richfield	Whittier La Habra	Montebello	Coyote	Santa Fe Springs (Effective June 14, 1930)	Newhall McKittrick Kern River	Midway-Sunset Elk Hills Buena Vista Hills Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Orcutt (Santa Maria) (Union Oil Co.)	Santa Paula (Ventura) (Union Oil Co.)	Ventura Avenue (Associated Oil Co.)
14–14.9**	$0.70	....	....	$0.70	$0.70	$0.70	$0.70	....	$0.55	$0.55	$0.55	$0.55	....	$0.55	$0.70	$0.70
15–15.9	.70	....	....	.70	.70	.70	.70	....	.55	.55	.55	.55	....	.55	.70	.70
16–16.9	.70	....	....	.70	.70	.70	.70	....	.55	.55	.55	.55	$1.65	.55	.70	.70
17–17.9	.70	....	F. o. b. ship	.70	.70	.70	.70	....	.55	.55	.55	.55	for	.55	.70	.70
18–18.9	.76	....		.76	.76	.71	.76	....	.55	.62	.62	.62	55°	.65	.75	.76
19–19.9	.82	....		.82	.82	.77	.82	....	.55	.70	.70	.70	gravity	.70	.80	.82
20–20.9	.88	....		.88	.87	.83	.87	....	....	.78	.78	.78	and	.78	.85	.88
21–21.9	.94	....		.94	.93	.90	.93	$0.92	....	.86	.86	.86	over	.90	.90	.91
22–22.9	1.00	....	....	1.00	.98	.97	.98	.95	....	.94	.94	.94	....	.95	.97	.94
23–23.9	1.07	....	....	1.07	....	1.05	1.04	1.01	....	1.02	1.02	1.02	....	1.02	1.05	1.00
24–24.9	1.14	1.14	....	1.14	....	1.11	1.10	1.07	....	1.09	1.07	1.07	....	1.10	1.08	1.07
25–25.9	1.21	1.19	....	1.21	....	1.17	1.16	1.13	....	1.16	1.12	1.12	....	1.18	1.13	1.14
26–26.9	1.28	1.24	....	1.28	....	1.23	1.23	1.19	....	1.23	1.17	1.17	....	1.26	1.18	1.21
27–27.9	1.35	1.29	....	1.35	....	1.29	1.30	1.25	....	1.30	1.23	1.22	....	....	1.23	1.28
28–28.9	1.42	1.34	....	1.42	....	1.35	1.37	1.31	....	1.35	1.27	....	....	....	1.28	1.35
29–29.9	1.46	1.39	....	†1.46	....	1.38	1.41	1.37	....	1.41	1.31	....	....	....	1.33	1.39
30–30.9	1.50	1.45	....	†1.50	....	1.41	1.45	1.43	....	1.47	1.35	....	....	....	1.39	1.43
31–31.9	1.55	1.51	....	....	....	....	....	1.49	....	1.53	1.39	....	....	....	1.45	1.48
32–32.9	1.60	1.57	....	....	....	....	....	1.55	....	1.59	1.43	....	....	....	1.51	1.53
33–33.9	....	1.64	....	....	....	....	....	1.60	....	1.65	1.47	....	....	....	1.58	1.59
34–34.9	....	1.71	1.32	....	....	....	....	1.65	....	††1.71	1.51	....	....	....	....	1.65
35–35.9	....	1.78	1.39	....	....	....	....	1.70	....	††1.77	1.55	....	....	....	....	1.71
36–36.9	....	1.84	1.46	....	....	....	....	1.75	....	....	....	....	....	....	....	....
37–37.9	....	1.90	1.53	....	....	....	....	1.80	....	....	....	....	....	....	....	....
38–38.9	....	1.96	1.60	....	....	....	....	1.85	....	....	....	....	....	....	....	....
39–39.9	....	2.02	1.66	....	....	....	....	1.90	....	....	....	....	....	....	....	....
40–40.9	....	2.08	1.72	....	....	....	....	....	....	....	....	....	....	....	....	....
41–41.9	....	2.14	1.78	....	....	....	....	....	....	....	....	....	....	....	....	....
42–42.9	....	2.20	1.84	....	....	....	....	....	....	....	....	....	....	....	....	....

*Inglewood prices run only to 28.9 gravity; Olinda-Brea Canon to 31.9 gravity.
†Richfield crude only. ††These two grades apply on Lost Hills only.
**Standard does not contract for crude testing below 14 gravity, but pays 45c per barrel when purchased.

REFINERS' and COMPOUNDERS' SUPPLIES

Following are average market prices for materials used by refiners and compounders effective on the date shown.

Refiners' Supplies

	July 28	July 21
Soda Ash light 58% bags, cwt.	$1.32	$1.32
Silicate of Soda 60 deg. drums, cwt.	$1.55	$1.55
Silicate of Soda 40 deg. tank cars, cwt.	$0.60	$0.60
Silicate of Soda 40 deg. drums cwt.	$0.80	$0.80
Sal Soda wks.	$1.00-1.05	$1.00-1.05
Caustic Soda 76% solid, cwt.	$2.90	$2.90
Sulfuric Acid 60 deg. tank cars, f.o.b. shipping point per ton	$11.00	$11.00
Oleum 20%, fuming sulfuric, tank cars, wks.	$18.50	$18.50
Sulfur, flowers of cwt.	$3.10-4.00	$3.10-4.00
Liquid Chlorine, tank cars, wks. lb.	3.50-5.00	3.50-5.00

Compounders' Supplies

	July 28	July 21
Vegetable Oils		
Linseed carloads, spot lb.	13.60	13.60
Tanks, spot	13.20	13.20
Soya Bean, Tank, coast lb.	8.50–9.00	8.50–9.00
Oleic Acid		
Distilled, tanks lb.	8.25	8.25
Distilled, bbls. lb.	9.125	9.125
Saponified, tanks lb.	8.50	8.50
Saponified, bbls. lb.	9.375	9.375
Lard Oils		
Prime Winter Strained lb.	13.125	13.125
Extra Winter Strained lb.	11.00	11.00
Extra lb.	10.75	10.75
Extra No. 1 lb.	10.25	10.25
No. 1 lb.	10.00	10.00
No. 2 lb.	9.75	9.75
Tallow oil lb.	10.00	10.00
Neatsfoot Oil		
Pure, bbls. lb.	13.00	13.00
Extra, bbls. lb.	11.00	11.00
No. 1 bbls. lb.	10.50	10.50
Cold Pressed lb.	17.25	17.50
Fish Oils		
Menhaden Oil Light Pressed gal.	57–58	57–58
Light Pressed, tank cars, N. Y. gal.	47–48	47–48
White bleached gal.	57–58	57–58
Yellow bleached gal.	51–54	51–54
Whale, extra winter bleached, gal.	85	85
Naval Stores		
Steam, distilled turpentine, N. Y. gal.	40	40
Steam distilled turpentine, Savannah gal.	39	39
Gum turpentine, N. Y. gal.	44	44
Gum turpentine, f.o.b. cars Savannah gal.	38.25	38.25
Wood Rosin, N. Y. gal.	$5.26	$5.26
Wood Rosin F, Savn'h bbl.	$4.50	$4.50
Gum Rosin B, N Y. bbl.	$5.65–$5.85	$5.65–$5.85
Gum Rosin B, f.o.b. cars Savannah bbl.	$4.90	$4.90
Rosin oil, pure gal.	57	57
Rosin Oil, compounded gal.	50	50
Pine Tar		
Kiln burnt bbl.	$13.00–14.00	$13.00–14.00
Retort bbl.	$13.50–14.50	$13.50–14.50
Alcohol		
Denatured Formula 5, in bbls., per gal.	44–46	44–46

Merchandising and Jobbing Ideas Marketers Are Practicing

By E. L. Barringer
N. P. N. STAFF WRITER

LUBRICATING oil storage tanks at the bulk plant of the Long Oil Co. in Manhattan, Kansas, are heating by steam lines buried in and under the tank footings. About half a mile of 2-inch steam line was placed under the four 12,000-gallon and nine 6500-gallon tanks.

Across one side of the lubricating oil warehouse a concrete wall about three feet high was built. I beams from the concrete wall to the outside warehouse wall support the tanks. The steam lines were placed under the I beams, and sand was filled in. In winter the sand becomes so hot it is almost impossible to touch it. All incoming and barrel filling lines are in the open, resting on the I beams and the sand.

* * *

Shop for Gasoline but Buy Best Oil

C. H. Armould, of the Armould Independent Oil Co., Quincy, Ill., observes that while motorists will rush in to buy cheap gasoline they will buy the higher priced oils.

Undoubtedly the advertising of the better grades of oil has made an impression on the public and it is willing to accept the higher priced goods to avoid the pictured motor troubles.

Another slant is that the public apparently is willing to pay a higher price for merchandise purchased rather infrequently while on commodities purchased day in and day out it will shop for the best price. Buying gasoline seems to be a continuous process while motor oil is taken on only occasionally in comparison, and the savings of a few pennies a quart does not seem so big.

* * *

Overcomes Handicap to Become Star Salesman

In spite of the handicap of a hare lip, Tom Stewart is the best salesman working at the service stations of the Armould Independent Oil Co., Quincy, Ill.

Tom started to work for the company at a station near Quincy and later was brought into the headquarters city. He is 22 years old, dresses well, and drives a good car. Women customers prefer buying from Tom, but it is a paradoxical situation that Tom so far has evinced no desire for the ladies.

His favorite greeting to his customers is, "Har, there old timer."

C. H. Armould, head of the company, credits Tom with a positive type of personality that attracts customers in spite of his handicap.

* * *

Petroleum Alley in Kansas City

Roanoke road and Southwest blvd. in Kansas City might well be renamed "Petroleum Alley" The Frisco railroad serves the district which has more than a million gallons storage capacity at the bulk and grease manufacturing plants.

Here is how the oil companies count off coming down Roanoke into Southwest blvd. and in the neighborhood. Barnsdall Corp., White Eagle Oil Corp., Atlantic-Pacific & Gulf Oil Co., Battenfeld Grease & Oil Co., Kansas City Fuel Oil Co., Arrow Oil Corp., A. J. Stevens Grease & Oil Co., Phillips Petroleum Co., Continental Oil Co., Cities Service Oil Co., Skelly Oil Co., Nourse Oil Co., Jacobson Oil Co., Scout Oil Co., Paramount Oil Co., and Southern Oil Co.

* * *

Kent Oil Co. Builds One-Stop Station

The Kent Oil Co., Salina, Kan., is erecting a one-stop service station at Ellis, Kansas. The station will be leased so the company will eliminate the investment in accounts receivable, stock shortages, and to have a home-town boy running the business as his own.

* * *

New Bucketing Record to Shoot At

And now comes another claimant for the highest record in bucketing gasoline from a tank truck in a single day to country trade.

Robert T. Barr, Penalosa, Kan., wants Ted Dewey, Cheney, Kan. to know that he has gone him 785 gallons better. On July 13, 1928, Mr. Barr says, he sold 2985 gallons from one truck to farm trade, as compared with Mr. Dewey's 2200 gallons, published as the record in the March 12, 1930 issue of NATIONAL PETROLEUM NEWS, Page 71. Mr. Dewey in that issue claimed that he had beaten the record made by Clarence Snyder, Hillsboro, Ind. who had sold 1432 gallons of gasoline and kerosene to the farm trade in one day.

Writes Mr. Barr:

"The best day I have a record of is 2985 gallons, all in the country, on July 13, 1928 and for that entire month 36,795 gallons of gasoline, and 12,770 gallons of kerosene.

"Contrary to Mr. Dewey's opinion, these big days just happen and you do not realize it's happening till everything is over, although it gets to be a drag before the busy season is over. I have never run more than one truck and have no pump or filling station, while I do deliver in town sometimes."

* * *

A. W. Long Begins Building Estate

A. W. Long, president of the Long Oil Co. at Manhattan, Kansas, has started building a large home in the northwest section of Manhattan. The house, garage, and fence ornaments will be constructed of native stone. Mr. Long had a large tract of land on a hill overlooking the city and the Blue river valley. Three acres was given to the city for a park. On five acres of the land he is building his home. In the neighborhood a number of prominent men of Manhattan are building also.

* * *

Sales Records Checks Accuracy of Meters

When trouble crops out in the gasoline tanks at the main service station of the Lesh Oil Co. at Ottawa, Kansas, A. C. Carpenter, president, has attendants record gallonage by sales. A card is attached to each pump. Attendants note the number of gallons, meter reading, and initial the sale. The check shows whether the meter is off in recording gasoline coming from the visible bowls. And sometimes it shows that some attendant may be bilking the company.

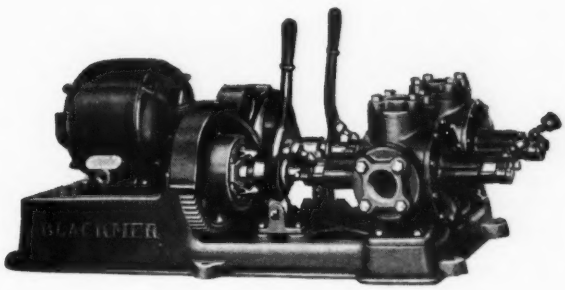
* * *

Eagle Is Globe Symbol for White Eagle

Globes in the shape of an eagle are on pumps dispensing gasoline of the White Eagle Oil Corp. There is no letter on the globes. The glass is white. In front of the stations is a replica of the white eagle, mounted on a pedestal.

LONG-LIVED?

Well, as Pumps Go, A Quarter of a Century *IS* a Long Time!



The very first Blackmer Rotary Pump ever built was installed in the bulk station of one of the world's largest oil companies.

This unit was in continuous operation for almost a quarter of a century. It was removed for the sole reason that pumps of larger capacity were required.

Twenty-five years of service *is* a long, long time—yet one of these original pumps, now mounted on another base, is *still* giving satisfactory service.

Such long-lived performance is only further evidence of the soundness of Blackmer Design and the Blackmer principle of operation. Every Blackmer Rotary Pump can be made like new by the simple, quick, replacement of "buckets"—*the only part that ever shows signs of wear.*

Get the facts on Blackmer Rotary Pumps before you place your next pump order. You can have "More Gallons Per Dollar"—just as well as not.

BLACKMER PUMP COMPANY
1801-B Century Ave., Grand Rapids, Mich.

BLACKMER ROTARY PUMPS

"More Gallons Per Dollar"

Transactions in Oil Shares on New York Stock Exchange

1929 High	1929 Low	1930 High	1930 Low	Listed Shares	Par Value	Company	Div. Rate	Last Paid	Transactions Week Ended July 26 Sales	First	High	Low	Last	Change
42⅜	17½	42¼	20½	922,075	N.P.	Amerada Corp.	50cQ	Apr. 30, 30	3,600	24¾	24¾	23⅝	24½	— ⅛
64¾	12½	37	15¼	209,180	N.P.	American Republics Corp.	....	.....	2,300	19½	20½	17¼	20¼	— ⅜
47¼	34½	51	32½	2,240,000	$25	Associated Oil.	50cQ	June 30, 30	40	41⅜	41⅝	40	40	— 1⅜
77⅞	30	51⅜	30⅜	2,683,868	25	Atlantic Refining Co.	‡25cQ	June 16, 30	61,000	36	39¾	35⅛	38¾	+ 2½
49⅛	20	34	20½	2,257,108	25	Barnsdall Corp. A.	50cQ	May 7, 30	1,200	25	25	23¼	23½	+ ¾
34½	25	35	28	2,060,966	25	California Petroleum Corp.	....	Jan. 1, 29	.....	....	....	....	....	.....
32⅞	12½	20⅝	12¼	1,444,970	N.P.	Colonial Beacon Oil Co.	....	.....	11,000	14⅛	15	14	15	+ 1
37¾	18	30½	18⅜	4,610,258	N.P.	Continental Oil (Delaware)	....	.....	27,800	21⅝	22⅜	20½	22	+ ¼
94¾	42¼	71⅛	39	410,857	$100	General Asphalt Co.	$1Q	June 16, 30	3,700	47	47	44⅜	46⅞	— ⅜
109	26	116⅞	52¼	250,000	100	Houston Oil.	....	.....	68,500	85	89¼	81⅛	88⅜	+ 2⅜
39⅜	17¾	32	19⅜	1,379,295	N.P.	Independent Oil & Gas.	50cQ	Apr. 30, 30	3,700	23⅛	23⅜	22⅜	22¼	— 1
53	13⅛	28⅜	8⅞	699,066	10	Indian Refining.	....	Dec. 15, 20	22,100	13½	14½	12⅜	13⅞	0
51¼	11½	27¾	8⅛	568,816	10	do certificates.	....	.....	100	13⅛	13⅛	13⅛	13⅛	— ⅜
38⅜	16½	29½	21¼	3,994,150	N.P.	Lago Oil & Transport.	....	Aug. 2, 27	4,400	29⅛	*29½	29	29½	+ 6
18	7	12	8	1,187,701	N.P.	Louisiana Oil Refining.	....	.....	5,200	9	9⅞	9	9	— 1
100¼	80	89½	80¼	40,000	$100	do pfd.	$1.62½Q	May 15, 30	.....	....	....	....	....	.....
18½	5⅞	10⅜	4½	330,000	N.P.	Maracaibo Oil Exploration.	....	.....	400	5	5	5	5	— ¾
295	176	180	174	459,428	$100	Mexican Petroleum.	$3Q	July 21, 30	.....	....	....	....	....	.....
105	102	...	...	120,000	100	do pfd.	$2Q	July 21, 30	.....	....	....	....	....	.....
69⅜	9¼	37	16⅜	1,244,383	N.P.	Mexican Seaboard Oil.	....	Oct. 15, 24	58,400	23¾	24½	21½	24	+ ⅜
39⅞	22⅛	33	22⅛	1,899,138	N.P.	Mid-Continent Petroleum.	50cQ	May 15, 30	3,200	24⅛	24½	23½	24	— ½
3⅝	¾	2½	⅞	908,171	N.P.	Middle States Oil ctfs.	....	.....	1,000	1⅛	1¼	1	1⅛	— ⅛
69	40¼	64¼	51⅝	1,000,000	$50	Pan American Petrol. & Trans.	....	Oct. 20, 27	400	59	59½	59	59	— ½
69¼	40½	67½	50½	2,422,221	50	do B.	....	Oct. 20, 27	6,800	59⅛	59⅜	58⅝	59¼	
15¾	3	12¾	4⅛	199,370	N.P.	Panhandle Prod. & Refg.	....	.....	400	8	8¼	7½	7½	— ⅜
76	47½	80	47½	25,666	$100	do pfd.	....	July 2, 23	.....	....	....	....	....	.....
...	...	27¼	18¾	2,937,500	N.P.	Petroleum Corp. of America.	37½cQ	June 30, 30	7,700	21½	21½	20½	21½	— ¼
47	24¼	44⅝	29⅜	2,670,089	N.P.	Phillips Petroleum Co.	50cQ	June 30, 30	31,500	33½	33⅞	32½	33⅜	— ⅛
3⅜	1	2½	1	1,184,917	$25	Pierce Oil Corp.	....	.....	1,100	1¼	1¼	1⅛	1⅛	— ⅛
51½	20	52	20½	150,000	100	do pfd.	....	Feb. 1, 22	.....	....	....	....	....	.....
5⅞	½	7⅜	2¼	2,500,000	N.P.	Pierce Petroleum Corp.	....	.....	5,900	5¼	5½	5¼	5½	0
65⅜	40½	54	35⅝	2,435,670	$25	Prairie Oil & Gas Co.	50cQ	June 30, 30	1,400	38⅛	38½	37¾	37¾	— 1
65	45	60	44⅛	4,050,000	25	Prairie Pipe Line Co.	‡75cQ	June 30, 30	6,000	49	49	46¼	46½	— 2½
25⅞	4	11⅞	6½	749,017	50	Producers & Refiners Corp.	....	Sept. 15, 30	400	7⅝	8	7⅝	8	0
46¾	25½	38	30	56,907	50	do pfd.	....	May 4, 25	.....	....	....	....	....	.....
30¾	20	27¼	19½	3,038,370	25	Pure Oil Co.	37½cQ	June 2, 30	8,800	22¼	22¼	21⅝	21¾	— ⅜
116	108	114¾	110½	130,000	100	do 8% pfd.	$2Q	July 1, 30	10	112½	112½	112½	112½	0
49⅝	22⅝	28¼	14¾	2,101,550	25	Richfield Oil (California).	50cQ	May 15, 30	35,000	17⅝	18½	16¾	18¼	+ ½
42½	15	25⅜	16¼	1,235,270	N.P.	Rio Grande Oil Co.	50cQ	July 25, 30	2,200	17½	17⅜	17	17½	— ¼
64	43¼	56½	49¼	951,310	$13.40	Royal Dutch (N. Y. shares).	$1.3415	Feb. 15, 30	4,900	53½	54⅛	53¼	54⅛	0
55¾	43⅜	48⅛	42⅜	77,492	£2	Shell Trans. & Trading.	97c	Jan. 28, 30	50	44¼	44¼	44¼	44¼	— ¼
31¾	19	25½	18	13,069,076	N.P.	Shell Union Oil Corp.	35cQ	June 30, 30	9,200	19¼	19⅜	18⅞	19¼	— ⅛
...	...	106¼	95	400,000	100	do pfd.	$1.37½Q	July 1, 30	1,600	98	100½	98	100⅜	+ 1⅜
40⅛	15	37	18	869,255	10	Simms Petroleum Co.	40cQ	June 14, 30	7,400	22½	22¾	22	22	— ½
45	21	32	20⅜	5,455,665	N.P.	Sinclair Consolidated Oil Corp.	50cQ	July 15, 30	53,900	24⅞	25	23⅝	25	+ ⅛
111	103	112¼	108	154,685	100	do pfd.	$2Q	May 15, 30	100	110½	110½	110½	110½	— ½
46½	42	42	28½	1,097,650	$25	Skelly Oil Co.	50cQ	June 16, 30	14,100	30¾	31⅞	30½	30¾	— ¾
...	...	99¾	88	120,000	100	do pfd.	.....	.....	900	91⅞	92	89¼	92	+ 4
...	...	104¼	98	750,000	100	S. O. Export Corp. pfd.	$2.50S.A.	June 30, 30	500	102	102¼	102	102	— ¼
81⅞	51½	75	55½	13,016,434	N.P.	S. O. California.	62½cQ	June 16, 30	14,200	62⅛	63¼	61⅛	62¾	— ⅛
...	...	49	29	320,000	$25	S. O. Kansas.	50cQ	June 16, 30	700	34	34	32½	32½	— 2⅜
83	48	84⅜	58	25,443,643	25	S. O. New Jersey.	‡25cQ	June 16, 30	325,300	72¼	75	71⅞	74⅛	+ ⅜
48⅛	31¾	40⅝	30	17,809,530	25	S. O. New York.	40cQ	June 16, 30	23,200	33¼	33¼	32	32½	— ¾
86⅜	55	70	50	1,416,911	N.P.	Sun Oil Co.	25cQ	June 16, 30	600	57⅝	58⅝	57⅜	58⅛	— 1
105½	100	105⅛	102½	100,000	$100	do pfd.	$1.50Q	June 2, 30	280	104¼	104½	104	104	— ¼
24	5¼	9¾	4⅜	1,026,979	N.P.	Superior Oil Corp.	....	.....	9,000	5½	5½	†4⅝	4¾	— ⅛
71⅞	50	60½	50⅛	9,850,724	$25	The Texas Corp.	75cQ	July 1, 30	26,300	53⅛	53⅝	52¼	53	— ¼
23⅞	9½	14½	8¼	929,947	10	Texas Pacific Coal & Oil.	s2½%	Dec. 31, 29	2,200	9½	10⅛	9	9⅛	— ⅜
23½	10	17¾	10¾	5,881,980	N.P.	Tide Water Associated Oil.	30cS.A.	Feb. 15, 30	7,000	14⅛	14⅝	14	14⅛	+ ⅛
90⅞	74⅜	89¾	78	732,550	$100	do pfd.	$1.50Q	July 1, 30	800	82¾	84	82¾	83¼	+ ¾
40	14	31	19½	2,191,820	N.P.	Tide Water Oil Co.	20cQ	June 30, 30	.....	....	....	....	....	.....
97½	85⅛	94⅞	83	199,443	$100	do pfd.	$1.25Q	May 15, 30	400	85	86⅞	85	85⅝	+ 3⅛
...	...	24	16¼	3,339,150	N.P.	Transcontinental Oil.	30c	May 1, 30	24,600	18⅝	18¾	18¼	18½	— ⅛
57	42⅜	50	37	2,201,008	$25	Union Oil Co. (California).	‡50cQ	May 10, 30	800	41⅛	41¾	40⅞	41	— 1
...	...	38½	25¼	1,254,048	N.P.	Union Tank Car Co.	40cQ	June 2, 30	1,500	29⅞	29⅞	28⅞	28⅞	0
42⅞	15	27	12¾	777,603	N.P.	Warner Quinlan Co.	25cQ	July 3, 30	6,000	14	14	13¼	13¾	— ¼
38	25	29½	26	490,000	N.P.	White Eagle Oil & Refg.	50cQ	Apr. 20, 30	.....	....	....	....	....	.....
29¾	12⅞	21	11½	428,967	N.P.	Wilcox Oil & Gas Co.	....	May 10, 28	300	16½	16½	16½	16½	— ¼

*New high †New low ‡Also extra s-Stock Total sales 920,080

Pittsburgh Curb Market

Transactions Week Ended July 25, 1930

	Sales	High	Low	Last	Change
Arkansas Gas A. .	300	11⅛	10⅛	10⅛	— ⅛

Pittsburgh Stock Exchange

Transac tions Week Ended July 25, 1930

	Sales	High	Low	Last	Change
Ark. Nat. Gas....	1,860	12	10¼	10⅝	— ⅜
do pfd.....	678	8	7⅞	8	— ⅛
Devonian Oil....	50	10	10	10	—1
Lone Star Gas....	5,252	41½	39	39	—2½
Plymouth Oil....	1,300	26½	26	26½	0
Shamrock Oil & Gas	1,270	17⅝	16½	17¼	— ¼
Waverly Oil A...	100	22	22	22	+2
Leonard Oil.....	25	1½	1½	1½	— ½
Phoenix Oil.....	3,000	.65	.50	.60	—.05
do pfd.....	1,000	.40	.40	.40	0

Financial Note

Middle States Petroleum Corp.—Mathew C. Brush, president American International Corp., elected director to succeed late James E. Sague.

Shell to Complete Refinery At Buenos Aires

Cleveland, July 25.—Work on the refinery of the Shell Transport & Trading Co. at Buenos, Argentine, is being resumed, according to Viscount Bearsted, chairman of the board of managing directors, at the annual meeting in London.

Cessation of construction and other operations in developing the concession granted to this company by the Argentine government was made necessary by the withdrawal of the permit early in 1929. According to the chairman this permit was recently rectified again, and the development of the concession will again be pushed.

The chairman further stated that the company's production during 1929 was only 15,000 tons of oil, as compared to 50,000 tons in 1928. The reduced production was caused by the stoppage of work at the time of withdrawal of the permit. The company's potential production is rated at 350,000 tons annually.

The recent decision of the directors to build a nitrogen fixation plant in California, which will use natural gas as a source of supply for part of the basic raw material, comes as a result of the successful operation of a plant for the same purpose in Velsen, Holland. Products from this plant are sold through the present marketing organization of the company. According to the chairman it is planned to synthesize various other chemicals from natural gas, in addition to the production of ammonia and nitric acid from atmospheric nitrogen.

Natural Gas Notes

Allegheny Gas Corp.—Net earnings for five months ended May 31 reported at $201,321, an increase of 52 per cent over earnings first five months of 1929. Contracts reported signed to supply more gas to Pittsburgh Plate Glass Co., East Ohio Gas Co. (Standard of New Jersey), and Ohio Fuel Gas Co. (Columbia Gas & Electric).

Southwestern Natural Gas Co.—L. C. Farley, manager of this company, has been elected assistant secretary. He has headquarters in Tulsa, whence he is superintending the building of a 112-mile high pressure line connecting the Quinton field in Oklahoma with Tulsa, Muskogee and other cities.

Appalachian Gas Corp.—This company reports having acquired more than 95 per cent of the common stock of the West Virginia Gas Corp. In the last three months the company has acquired control of Texas Gas Utilities Co. and Southwestern Natural Gas Co. and substantial stock interest in Memphis Natural Gas Co. and Allegheny Gas Corp.

Southwestern Natural Gas Co.—Contract reported signed to supply gas over long to Insull utilities in cities on or near the Mississippi Gulf Coast. A 201-mile branch transmission for this service is being built from the main Atlanta line. This branch will also supply Jackson and Hattiesburg, Miss., and Mobile, Ala.

American Utilities & General Corp.—This company and Moody-Seagraves interests in last six months have acquired 1,000,000 acres of proven and potential natural gas lands in Kentucky with estimated reserves of 480,000,000,000 cubic feet of gas. It is reported negotiations are under way for outlets.

Increased Gas Tax Didn't Increase Revenue

CLEVELAND—Increased gasoline taxes in North Dakota did not produce increased revenues, claim opponents to the proposed 1 cent increase. Voters June 25 rejected the proposed increase from 3 to 4 cents.

In 1929 North Dakota actually received $50,000 less than it would have under a 1-cent tax, State Senator Arthur F. Bonzer claimed based on state records. Refund claims have taken from 24 to 48 per cent of the gross revenue, and he claimed a 4-cent tax would result in refunds of 60 per cent. He urged voters to reject an increase until the present law was improved, an efficient road building program adopted, and the administration of the funds by the highway department was on a business like basis.

August Meeting For Tennessee Jobbers

NASHVILLE, July 25.—The triannual meeting of the Tennessee Oil Men's Association will be held at the Hermitage Hotel, Nashville, Aug. 19 and 20, according to Lew W. Collins, secretary.

Exports of unrefined paraffin wax to the United Kingdom dropped from 37,400,000 pounds in 1927 to 30,480,000 pounds in 1929 and exports of refined wax dropped from nearly 70,000,000 pounds in 1929 to 47,700,000 pounds in 1929.

N. P. N. Service Record

Some of the requests for information, data and advice, which were taken care of in various National Petroleum News offices in the past week are:

Texas inquirer given names and addresses of oil companies operating in South America, Australia and the West Indies.

* * *

Librarian of electrical society in New York furnished back issues containing series of articles on recent developments in the gas industry.

* * *

Southeastern copper company asked for latest date of incease in Bunker C fuel oil prices at New York.

* * *

Express company at New York asked for enlargement of map showing natural gas pipeline systems published on page 28 of July 2 issue, saying it was best it had ever seen.

* * *

Eastern oil field machinery manufacturer given addresses of oil producing companies.

* * *

Motor truck manufacturer at New York told who handles oils of a certain Mid-Continent refiner in the East.

* * *

New York manufacturer inquired at Houston office about used oil equipment.

* * *

Illinois geologist given drilling information on West Texas from Houston office.

* * *

Production executive of worldwide producer-refiner-marketer furnished letters of introduction to Pacific Coast oil executives at N.P.N. Houston office and furnished general Pacific Coast information.

* * *

Chief geologist of Mid-Continent producer-refiner furnished information on hydrogenation process and referred to articles in N.P.N

* * *

Gas engineer of Mid-Continent producer given map of gas lines and pools of southwest appearing on page 60 of the July 16 issue.

THE OIL INDUSTRY EXCHANGE

Positions Wanted

ADVERTISING, SALES PROMOTION MANAGER: Young man, 27, college graduate, assistant advertising manager of major company. Knows petroleum marketing, merchandising. Prepare booklets, leaflets, dealer campaigns, dealer helps, direct mail, general publicity, magazine, newspaper advertisements, outdoor advertising. Available August 15. Address "SALES" care National Petroleum News, 35 E. Wacker Drive, Chicago, Ill.

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Address Box 560

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Standard Oil Stocks on New York Curb

1929 High	1929 Low	1930 High	1930 Low	Outstanding Shares	Par Value	Companies	Div. Rate	Last Paid	Transactions Sales	Week Ended July 26 First	High	Low	Last	Change
18¾	13½	18½	12¼	.....	£1	Anglo-Amer. Oil voting stk. ctfs..	36c	June 5, 29	.....	.....	.....	.....	.....	.....
17⅛	11	19	12	.....	£1	do non-voting stk. ctfs.....	36c	June 5, 29	.....	.....	.....	.....	.....	.....
2½	¾	1	⅜	500,000	N.P.	Atlantic Lobos Oil.....	....	.....	.....	.....	.....	.....	.....	.....
4⅛	1	1½	1¼	200,000	$50	do pfd.....	.....	.....	.....	.....	.....	.....	.....	.....
46½	25	25	14	40,000	25	Borne Scrymser Co.....	$1S.A.	Apr. 15, 30	10	17	17	17	17	— 3
74¼	55	69	55¼	200,000	50	Buckeye Pipe Line Co.....	$1Q	June 14, 30	.....	.....	.....	.....	.....	.....
210	130	184⅞	140⅛	120,000	25	Chesebrough Mfg. Co.....	‡$1Q	June 30, 30	.....	.....	.....	.....	.....	.....
11⅜	5⅝	7⅝	5½	.....	N.P.	Creole Petroleum Co.....	....	.....	4,800	6¾	6¾	6⅛	6¼	— ⅛
75¾	40	65¾	30½	30,000	$ 50	Cumberland Pipe Line Co.....	$1Q	June 16, 30	.....	.....	.....	.....	.....	.....
70½	42	54⅝	40	50,000	100	Eureka Pipe Line Co.....	$1Q	May 1, 30	100	40	40	†40	40	0
....	....	6¾	2½	280,000	N.P.	Galena Oil Corp. w.i.....	....	.....	.....	.....	.....	.....	.....	.....
....	....	37¼	30	.....	N.P.	General Petroleum Corp. w.i.....	....	.....	.....	.....	.....	.....	.....	.....
128	74¼	119	78	2,974,645	$25	Humble Oil & Refg. Co.....	50cQ	July 1, 30	3,700	90	91⅛	88¼	91	— ⅛
41	22	30	18⅛	26,490,741	N.P.	Imperial Oil, Ltd.....	12½cQ	June 2, 30	3,900	20⅜	20⅜	19⅞	20¼	0
42¼	26	41	31⅞	300,000	$10	Indiana Pipe Line Co.....	50cQ	May 15, 30	800	33	33¼	33	33⅛	+ 1⅛
29⅜	15	24	17⅝	14,247,880	N.P.	International Petroleum Co.....	25c	June 16, 30	1,800	19	19¼	18⅞	19⅛	— ⅛
25⅞	10½	22⅝	15⅜	509,000	$12½	National Transit Co.....	25cQ	June 16, 30	900	16⅝	17	16⅝	17	+ ⅛
17¾	10	21	10⅜	100,000	10	New York Transit Co.....	40cQ	July 15, 30	2,500	16⅞	19	16¼	17¾	+ 1½
63	41	54	35½	40,000	50	Northern Pipe Line Co.....	$2S.A.	July 1, 30	50	37½	37½	37½	37½	0
79⅞	64⅜	75¾	62¾	2,400,000	25	Ohio Oil Co.....	$1Q	June 14, 30	1,300	66¼	66¼	65¼	65¼	— 1¾
105½	103¾	108	103	600,000	100	do pfd.....	$1.50Q	June 14, 30	1,100	105	105	105	105	0
44½	18⅝	32	17	400,000	25	Penn Mex. Fuel Co.....	$1	May 20, 30	100	19⅞	20	19⅞	20	+ ⅛
50	29	33	14⅝	160,000	25	Solar Refining Co.....	$1.25S.A.	Dec. 20, 29	200	14⅝	14⅝	†14⅜	14⅝	— ⅛
23½	13	20⅛	13	100,000	10	Southern Pipe Line Co.....	$5	June 2, 30	.....	.....	.....	.....	.....	.....
60¼	35⅛	45⅞	35	1,200,000	25	South Penn Oil Co.	‡50cQ	June 20, 30	100	37½	37½	37½	37½	0
70	45	64	45¼	35,000	50	Southwest Pa. Pipe Lines.....	$1Q	July 1, 30	.....	.....	.....	.....	.....	.....
63	45	59⅞	47⅝	16,850,587	25	S. O. Indiana.....	62½cQ	June 16, 30	25,400	51⅛	51¼	50⅜	51	— ⅛
46⅞	29	40½	30½	2,577,124	10	S. O. Kentucky.....	40cQ	June 30, 30	3,200	32⅜	32½	31⅞	32⅛	+ ⅛
50¼	40	48⅞	44¾	188,159	25	S. O. Nebraska.....	‡62½cQ	June 20, 30	300	46½	46½	46⅛	46⅛	— ⅜
129	60	108½	77	560,000	25	S. O. Ohio.....	62½cQ	July 1, 30	250	79½	80	78½	78½	— 1½
124½	113½	122	115¼	70,000	100	do pfd.....	$1.75Q	June 2, 30	120	117¾	117¾	116½	116½	— 1
18	5¼	10	5	34,158	25	Swan Finch Oil Corp.....	....	Jan. 15, 29	.....	.....	.....	.....	.....	.....
133¾	75⅛	97⅞	76¼	5,139,887	25	Vacuum Oil Co.....	$1Q	June 20, 30	8,500	87¾	88⅞	86	87	— ¾

*New high †New low ‡Also extra

Independent Oils on New York Curb

1929 High	1929 Low	1930 High	1930 Low	Par Value	Companies	Transactions Sales	Week Ended July 26 First	High	Low	Last	Change
.72	⅛	⅝	1/16	$1	Amer. Contr. Oilfields	.....	....	....	....	....	.....
8⅝	1⅜	4½	1½	5	Amer. Maracaibo....	500	2⅜	2⅜	2¼	2¼	— ⅛
4¾	1	1¾	1¼	10	Argo Oil.....	.....	.....	.....	.....	.....	.....
26	3¼	16¾	8¼	N.P.	Arkansas Nat. Gas...	3,500	11¼	11¼	10¼	10¼	— 1¼
24¾	6½	16⅜	8¼	N.P.	do Class A.....	6,500	10⅝	10⅞	9¾	10⅜	— 1⅛
9	4	8¼	7⅜	10	do pfd.....	400	7⅞	7⅞	7⅞	7⅞	0
70	50	28½	17	N.P.	British American Oil..	.....	.....	.....	.....	.....	.....
4⅞	⅞	2¾	¾	¼	Carib Syndicate.....	200	1⅛	1⅛	1⅛	1⅛	0
68½	20	44¼	24¼	N.P.	Cities Service.....	300,000	29	29½	27¾	29⅜	— 1⅝
99¼	84	93⅞	52	100	do pfd.....	200	91	91⅜	90⅜	91⅜	— 1
9¼	8	9	7⅝	10	do pref. B.....	.....	.....	.....	.....	.....	.....
96	81	89⅞	82	100	do pref. BB.....	.....	.....	.....	.....	.....	.....
1⅛	⅛	1/16	¼	1	Colombia Syndicate..	2,200	1/16	1/16	1/16	1/16	— 1/16
15	3⅛	8¼	3½	N.P.	Colon Oil Corp.....	800	3⅞	3⅞	3¾	3¾	0
....	....	21	8⅜	N.P.	Columbia Oil & Gas...	11,800	8¾	8⅞	8½	8½	— ¼
11¼	2½	5⅞	3½	10	Consolidated Royalty	.....	.....	.....	.....	.....	.....
135	42	74¾	32	N.P.	Cosden Oil Co.....	18,400	39¼	40⅞	36¼	40⅜	+ 1¼
87	55	70	60⅞	100	do pfd.....	.....	.....	.....	.....	.....	.....
2½	¼	1	¼	N.P.	Crown Central Pet...	3,800	½	¾	½	½	+ ⅛
11¾	4	....	....	N.P.	Crystal Oil.....	.....	.....	.....	.....	.....	.....
51⅜	51⅜	....	....	100	do pfd.....	.....	.....	.....	.....	.....	.....
26	6½	13½	7¼	N.P.	Darby Petroleum....	400	13	13	13	13	0
....	....	21¾	21½	N.P.	do new.....	.....	.....	.....	.....	.....	.....
11	2	11	4½	N.P.	Derby Oil & Refg.....	1,700	7½	7½	7⅛	7⅛	+ ⅛
44	17	60	30	N.P.	do pfd.....	25	44¼	44¼	44¼	44¼	+ 2¼
....	....	12	12	10	Devonian Oil.....	.....	.....	.....	.....	.....	.....
209	115	166⅛	117¼	$25	Gulf Oil Corp.....	2,900	129	129	125½	126	— 4
7½	1⅜	4	2¼	N.P.	Homaokla Oil.....	.....	.....	.....	.....	.....	.....
....	....	47½	26⅜	N.P.	Indian Territory A..	1,900	32¾	32¾	32	32¼	— 5/8
....	....	53½	26⅞	N.P.	do B.....	1,200	33¼	33¼	32⅛	32	— 2⅜
2⅛	⅜	1⅝	¾	10	Intercontinental Pet..	300	¾	⅞	¾	⅞	0
3⅝	1¼	3	1⅝	N.P.	Kirby Petroleum....	1,900	1¾	1¾	1¾	1¾	0
6⅛	1	4¾	1¼	N.P.	Leonard Oil & Dev..	1,800	1¾	1⅞	1¾	1⅞	0
38⅞	18	29	18⅜	N.P.	Lion Oil Refg.....	.....	.....	.....	.....	.....	.....
67⅜	28	55⅜	34⅛	N.P.	Lone Star Gas.....	3,400	40⅞	40⅞	39	39⅝	— 1⅛
....	....	31	17	$25	MacMillan Petrol....	300	17	17	†17	17	0
2⅞	¼	½	⅜	1	Magdalena Synd.....	800	¼	¼	¼	¼	0
38½	14	16	12	N.P.	Margay Oil.....	.....	.....	.....	.....	.....	.....
6⅜	2¼	7½	2	N.P.	Mexico Ohio Oil.....	500	2½	2½	2½	2½	— ½
....	....	11⅞	4½	N.P.	Middle States A.v.t.c.	2,800	6¾	7½	6	6¼	— ¾
....	....	6	2¾	N.P.	do Class B. v.t.c.	3,700	3	3⅛	2⅞	2⅞	0
42	8	36¼	15	5	Missouri-Kansas P.L.	16,500	20¾	21¾	20⅜	21	+ ⅛
1⅜	¼	¾	⅜	1	Mountain & Gulf Oil..	600	3/8	½	3/8	½	0
22⅞	7	12½	8	10	Mountain Producers..	800	8⅞	8⅞	8⅞	8⅞	0
43⅞	24	41⅜	25⅛	N.P.	Nat. Fuel Gas.....	7,800	32⅛	32¾	31⅞	32	— ⅞
5	2¼	3½	2⅜	$5	New Bradford Oil....	300	2⅝	2⅝	2½	2⅝	0
4¾	3⅜	3⅜	2⅜	10	New England Fuel...	400	2¾	2¾	2¾	2¾	0
24½	11⅜	16⅞	10⅜	25	N. Y. Pet. Royalty..	.....	.....	.....	.....	.....	.....
18½	6⅜	11¼	6	N.P.	North Central Texas	.....	.....	.....	.....	.....	.....
19¼	8¼	11¾	7¼	N.P.	Oilstocks Ltd. A.....	.....	.....	.....	.....	.....	.....
18¼	8½	11½	8½	N.P.	do B.....	200	10	10¼	10	10¼	+ ½
26⅝	12⅛	19½	12½	N.P.	Pacific Western Oil...	400	....	15½	15	15½	+ ¾
3½	½	2½	½	N.P.	Pandem Oil.....	25,300	¾	⅞	½	¾	— ⅛
10½	2¼	4¾	1⅞	N.P.	Pantepec Oil.....	200	2⅛	2⅛	2	2	0
25½	13¼	13¼	13¼	$25	Paragon Refg. B. ctfs.	.....	.....	.....	.....	.....	.....
28	17	29	19⅛	N.P.	Petroleum Corp.....	.....	.....	.....	.....	.....	.....
....	....	5⅞	2⅝	....	do warrants.....	3,400	3⅜	3⅞	3⅜	3¾	— ⅛
37	22	27½	20¾	N.P.	Plymouth Oil	1,200	26½	26½	26	26⅜	— ⅛
16	9	10¾	8⅛	$5	Red Bank Oil.....	.....	.....	.....	.....	.....	.....
8⅛	1⅛	5⅜	2⅛	N.P.	Reiter-Foster Oil.....	900	4	4	3⅞	3⅞	— ⅛
25¼	19	23½	17½	25	Richfield Oil pfd.....	200	19⅛	19⅛	19	19	0
29	13	25	14	N.P.	Root Refining pr. pfd.	200	19	19½	19	19½	— ⅞
11	3	8⅝	3⅜	N.P.	Ryan Consolidated...	400	4⅜	4⅜	4⅛	4⅛	— ⅜
5⅞	1⅞	2½	1⅜	10	Salt Creek Consol.....	.....	.....	.....	.....	.....	.....
25⅞	9	15¼	8¾	10	Salt Creek Producers	400	10½	10½	10½	10½	— ⅛
33¾	10	....	....	25	Shreveport El Dorado	.....	.....	.....	.....	.....	.....
....	....	39⅛	39	25	Signal Oil & Gas A..	.....	.....	.....	.....	.....	.....
24	9	17	9	N.P.	Southland Royalty...	800	10	10	9½	9½	— ¼
12	4	10	5	5	Sunray Oil.....	1,000	5⅝	5⅝	5⅜	5½	— ¼
23	7⅛	15¼	8¾	N.P.	Texon Oil & Land...	400	14¼	14¼	14¼	14¼	+ ⅛
81⅛	8⅛	16	8	10	Venezuela Mexico....	.....	.....	.....	.....	.....	.....
6½	1⅛	4½	2	5	Venezuela Petroleum.	3,500	2⅜	3	2⅜	2⅞	+ ⅜
9¼	2	5	2	1	Woodley Petroleum..	300	4¼	4¼	4¼	4¼	0
5⅜	¼	2½	⅛	N.P.	Y Oil & Gas.....	.....	.....	.....	.....	.....	.....

*New High †New Low

New York Bonds

Week Ending July 25

	High	Low	Last	Change
Asso. Oil gold 6s.....	103	103	103	0
Atlantic Refg. deb. 5s...	103	102½	103	+ ½
Cal. Pet. 5s.....	99¾	99¾	99¾	0
Cal. Pet. 5½s.....	102¼	102¼	102¼	— ⅛
General Pet. 5s.....	102½	102	102	— ⅛
Humble Oil & Refg. 5s...	101¾	101¾	101¾	0
Humble Oil & Refg. 5½s	102	101¾	101⅞	+ ⅛
Pan Amer. P & T 6s....	104½	104¼	104¼	0
Pan Amer P & T 6s.....	90¼	90¼	90¼	+ ⅛
Phillips Pet. 5½s.....	95⅞	95¼	95⅞	+ ¼
Pure Oil 5½s.....	100	99½	100	+ ½
Pure Oil 5½s.....	98¾	98	98¾	+ ⅝
Richfield Oil Calif. 6s....	89¼	88½	88½	+ ½
Shell Union Oil 5s.....	97	96½	96⅞	0
Sinclair Con. Oil 7s.....	104¾	104	104½	0
Sinclair Con. Oil 6½s...	104⅛	102½	103⅞	+ ⅞
Sinclair Con. Oil 6s D...	100¼	100⅛	100¼	+ ⅛
Sinclair Con. Crude 5½s.	102⅜	99⅜	102¼	+ ⅜
Sinclair Pipeline.....	102	100	101⅛	+ ⅞
Skelly Oil 5½s.....	96	95⅝	95⅞	+ ⅛
S. O. N. J. 5½s.....	104½	103½	104¼	+ ⅜
S. O. N. Y. 4½s.....	99⅜	99⅛	99¼	— ⅛
Transcontinental Oil 6½s war.....	109½	109¼	109½	+ ¼
Transcontinental Oil 6½s Ex-war.....	102	100⅜	100½	— ⅛
Union Oil of Calif. 6s A..	108⅞	108½	108¾	0
Union Oil of Calif. 5s C..	101	100½	101	+ ⅜
Union Oil of Calif. 5s war.	100¼	99⅞	100¼	+ ⅛
Warner-Quinlan 6s.....	81½	81½	81½	0
White Eagle Oil 5½s....	104½	104	104¼	+ ¼

New York Curb Bonds

Week Ending July 25

	High	Low	Last	Change
Cities Service 5s '66.....	83¼	82½	83	— ⅛
Cities Serv. 5s '50.....	102	100	100⅜	— 1¼
Cities Serv v. G. 5½s '42..	83¼	82¾	82⅞	— ⅜
Cities Serv. G. P. 6s '43.	91⅜	91¼	91¼	— ⅛
Cont. Oil 5¼s '37.....	97	96½	97	+ ½
Empire O & R 5½s '42..	83½	82⅞	83	— ⅛
Gulf Oil 5s '37.....	101¾	101¼	101¼	— ⅛
Gulf Oil 5s '47.....	103¼	103	103¼	—1
Indep. Oil 6s '39.....	104⅞	104	104	—1
Sun Oil 5½s '39.....	102	102	102	— ⅛
Valvoline Oil 7s '37.....	102	102	102	— ⅜

Oil Dividends

	Amount	Payable	Stock of Record
Buckeye Pipe Line q....	$1	Sept. 15	Aug. 22
S. O. Ohio pfd. q.....	$1.75	Sept. 2	Aug. 8
Sun Oil q.....	25c	Sept. 15	Aug. 25
do pfd q.....	$1.50	Sept. 1	Aug. 11